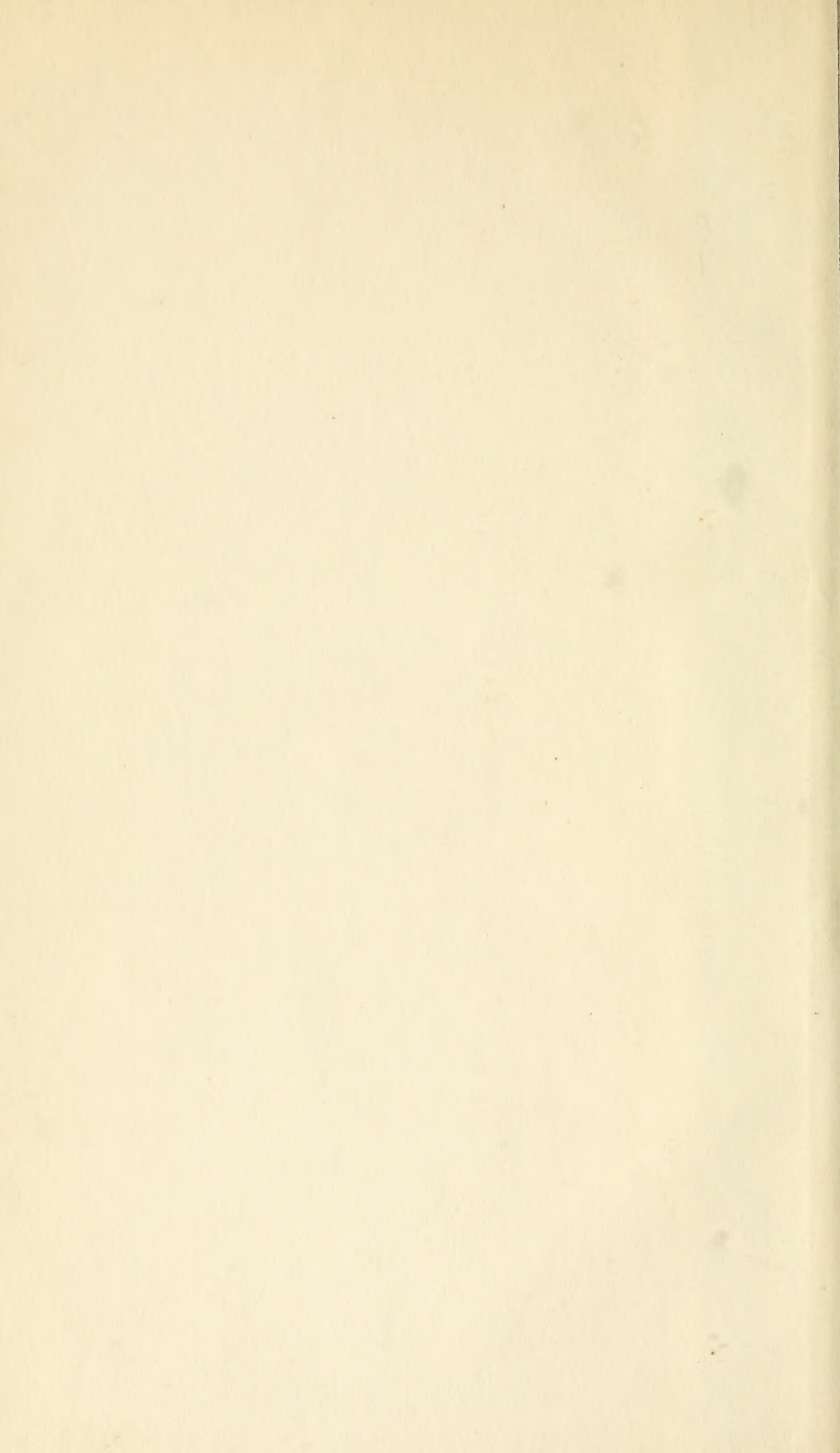


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THE
MEDICO-CHIRURGICAL
REVIEW,

AND
JOURNAL

(American
Reprint)

OF
PRACTICAL MEDICINE.

(NEW SERIES.)

VOLUME TWENTY-THREE.

[1st of APRIL to 30th of SEPTEMBER]

1835.

VOL. III. of DECENNIAL SERIES.

EDITED

By JAMES JOHNSON, M.D.

PHYSICIAN EXTRAORDINARY TO THE KING,

AND

HENRY JAMES JOHNSON, ESQ.

LECTURER ON ANATOMY AT THE SCHOOL IN KINNERTON STREET, AND FORMERLY
HOUSE SURGEON TO ST. GEORGE'S AND THE LOCK HOSPITALS.

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Dr Goodell OF THE
MEDICO-CHIRURGICAL REVIEW,

No. XLV. JULY 1, 1835.

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INTELLIGENCE, CORRESPONDENCE, &c.

In our advertising sheet will be found a notice of the new School of Anatomy, *Kinnerton Street*, contiguous to St. George's Hospital. This School almost unequalled for the accommodations it offers to Pupils, will be opened in *October* next. Mr. Tatum, Mr. H. Johnson (the junior Editor of this Journal), and Mr. Henry Charles Johnson, are the Lecturers and Demonstrators. Gentlemen from the Country will find at this School every possible arrangement conducive to their health and comforts.

We have received the two cases of *Prolapsus Ani*, cured by excision, from Mr. James Edwards, of Forfar. The operations were performed according to the practice of the best metropolitan surgeons; but we think the details of the cases are unnecessary.

From Mr. Groome, of Whitchurch, Salop, we have received the Drawings of a most extraordinary Case, of which but a very inadequate idea can be conveyed in words.

"The patient is a woman, 31 years of age, of a scrofulous diathesis—her health not so much impaired as might be expected, from the immense size of the tumor and long confinement. She first perceived it when 11 years old; it very gradually increased until she arrived at her twenty-sixth year, in which she had an illegitimate child; she menstruated three times afterwards, the last time being in August, 1830. After that period, its growth was much more rapid, in 1832 the weight being so great, she could not be moved without great difficulty and pain; she, therefore, took to her bed, and has not been able to leave it since. She informs me she perceives it larger every month, and that the increase has been greater the last three years than the whole former period. The circumference of the tumor, anteriorly, is 62 inches, longitude 36 inches.—Posterior view, in circumference, 76 inches.

Its origin is from the left hip and thigh; indeed it and the leg are completely enveloped in the mass, to within three inches of the ankle. The spine is much distorted, but was not so until the tumor was of considerable magnitude; it is sensitive in every part, the heat is greater than in any other part of the body."

We have received an apparatus for more correctly measuring minims, by Mr. R. ALLSOP, Operative Chemist, of *Shane Street*. We have tried it, and it certainly appears to secure greater accuracy of measurement than the common minim-glass can pretend to.

Dr. GILKREST, Deputy Inspector General of Hospitals at Gibraltar, has been recently elected a Corresponding Member of the Royal Academy of Medicine, at Paris.

(Communicated by R. Montgomery Martin.)

MEDICO-CHIRURGICAL REVIEW.

A Set of the above Journal, 1 to 40, with the exception of a single Number (27), to be sold by Mr. SANDERS, *Little Shire Lane*, for £3. 3s.

In the press,

Practical Observations on the Nature and Treatment of Nervous Diseases, with Remarks on the Efficacy of Strychnine in the more obstinate Cases. By G. RUSSELL MART, M.R.C.S., and late of His Majesty's hospital ship, *Raccoon*.

THE Medico-Chirurgical Review,

No. XLV.

[NO. 5 OF A DECENNIAL SERIES.]

APRIL 1, TO JULY 1, 1835.

1. PATHOLOGICAL RESEARCHES ON PHTHISIS. By *E. C. A. Louis*, M.D. &c. Translated by *Dr. Cowan*. Octavo, pp. 338. 1835.
2. A TREATISE ON TUBERCULAR PHTHISIS. By *James Clark*, M.D. F.R.S. (From the Cyclopædia of Practical Medicine.) 1834.
3. CONSUMPTION, WHY SO FATAL? &c. By *John Tyrrell*. 1835.

THE three works whose titles are affixed to this article, are recommended to our favourable notice by characteristic and peculiar merits; merits however differing not less in kind than in degree. The first is distinguished by the originality and comprehensiveness of its views, and by the rare accuracy of its details; the second by the perspicuity of its descriptions, and the practical sound sense of its precepts; and that of John Tyrrell, Gent. by being the production of an amateur Medicus, who has boldly stepped forward to enlighten our profession, and the public at large, on the true nature and proper treatment of a disease, which, he affirms, "is confessedly as little understood now, as it was 2300 years before the discovery of the circulation." Now, although we do not quite agree with Mr. Tyrrell, as to the truth of this most humiliating announcement, and although we do not anticipate much benefit in the treatment of pulmonary consumption, from the remedial means which he has proposed (practising deep inspirations and expirations of cool air, for the purpose of distending the bronchial tubes and pulmonary vesicles, and thus mechanically removing the congested state of the lungs in the neighbourhood of any tuberculous portion,) we are willing, and happy too, to award to him the meed of praise which the humanity of his motives, and the industry of his researches, very fairly entitle him to. Let him not "be deterred by the dread of freezing criticism, nor by the frown of power and hiss of bigotry." Critics are not the freezing, frowning, hissing monsters which his imagination has conjured up. By us, at least, he shall be gently treated, and even encouraged to persevere in his laudable emprise of medical authorship, as it may afford a pleasing pastime to himself, and will almost certainly exalt his reputation in the circle of his acquaintances; but, as sincere and *disinterested* friends of our lay brethren, we earnestly advise Mr. Tyrrell to eschew the actual treatment of consumption.

either in his own case, or in that of any of his friends, and to confine his researches to the more intellectual task of reading and writing on the physiology, pathology, and we do not even object to, the literary therapeutics of the disease.

We invite him and all our other courteous readers, to follow us in the analytical review which we now propose to give of the *Pathological Researches* of M. Louis, and of certain portions of Dr. Clark's treatise; for sure we are, that a studious acquaintance with these two excellent works will powerfully contribute to a more correct knowledge of the causes, symptoms, and effects of pulmonary consumption, and will thus lead the medical practitioner to a more rational, and, we may hope, a more successful mode of treating it. Both authors agree in referring the primary and original cause of the disease to a peculiar cachexy, or constitutional unhealthiness, which has been described under various names, such as the scrofulous or strumous diathesis, latent scrofula, the tubercular cachexia, the morbidly-lymphatic temperament, &c. and one of whose characters is a tendency to the deposition of the peculiar matter called tuberculous, in various organs and tissues of the body. To this conclusion they have arrived by very different roads; Louis, by the results of his minute pathological investigations of the changes left after death by the disease—Dr. Clark, by attentively examining its living features, and, as it were, its outward physiognomy, as revealed in the history of the patient's previous, as well as present constitution and state of health. It is to the former that we shall first and more particularly direct our readers' attention, leaving any remarks on the latter till the close of the article, if our prescribed limits do not then happen to be exceeded.

The labours of the French anatomists during the last thirty years have reaped a rich harvest of practical usefulness, as well as of most honourable fame. It is to them that we owe our present accurate knowledge of most subjects of pathology; and on none can they more justly lay claim to exclusive excellence, than on that which regards the various morbid changes which precede, accompany, and which are induced by phthisis, or pulmonary consumption. Bayle and Laennec laid the foundation and reared the superstructure; Andral and Louis has strengthened the one, and have completed and adorned the other. The peculiar excellence of the last named author, it is our present object to unfold; and, as they are in a great measure referable to the circumstances of his professional life during the last twelve or fourteen years, a brief notice of these will be useful as well as interesting.

M. Louis, from the age of 17 to 33, studied and practised medicine in Russia with considerable success. During an accidental visit to Paris, he became acquainted with M. Broussais, whose clinique he diligently followed for some time, and who, by the novelty of his speculations, and by his zealous prosecution of pathological researches, seems to have produced a strong impression on the mind of his associate. At first he was a proselyte to his preceptor's peculiar doctrines—of inflammation being the essential or active cause of all morbid changes; and of glandular diseases being generally, if not always, consecutive to and induced by chronic phlegmasia of some adjoining mucous membrane. Experience soon taught him, however, that these, like all other general doctrines in medicine, are only partially true; and, as the maxim which he had laid down for his future studies, was to yield his assent only to what he saw and felt, he found it necessary first to

question, and then to impugn the exclusiveness of the Broussaian school. Admitting that the author of the *Examen des Doctrines Medicales* had done much good to practical medicine, by the clear exposition which he had given of those latent forms of inflammation which had been previously so imperfectly known, and, therefore, so unskilfully treated, M. Louis was soon taught that there are other sorts or forms of morbid action, and of morbid lesions, besides inflammation and the structural changes induced by it. He determined now to consult the book of nature with his own eyes; and, with a mind free from all prejudice and prepossession, to examine and record its phenomena for himself, and to draw his own inferences, and to abide by his own deductions. With this view, he abandoned all private practice, and entered the hospital of La Charité as a clinical clerk to his friend, Professor Chomel. For seven years, says Dr. Cowan, including the flower of his bodily and mental powers (from the age of 33 to 40,) he consecrated the whole of his time and talents to minute and impartial observation. He regularly spent from three to four, and sometimes five hours a day at the hospital, devoting at least two hours to each post-mortem examination. This practice he rigorously adhered to during the whole time, being satisfied that, to observe *well*, he must not observe *hastily*; and that the only means to rectify inevitable errors, is continually to re-examine an object, however familiar, and as if it was presented for the first time. The vast number of minutely exact observations which M. Louis was thus enabled to make, have afforded the materials for the different works which he has recently published, and among the rest, of that now before us. It is based on the results of 123 cases, the history and symptoms of which, during life, were most carefully recorded, and of which the morbid appearances found on dissection, not only in the lungs themselves, but in every other viscus and organ of the body, were regularly noted down. The immense importance of researches carried on in such a patient philosophical manner, will be better appreciated by our readers, when they become acquainted with the contents of the volume; at present we shall allude only to two or three of the most striking results, the truth of which M. Louis has the merit either of having first announced and proved, or, if they had been discovered before, of having finally and irrevocably established. The existence of tubercles in any organ or tissue of the body, after the age of 15, indicates their simultaneous presence in the lungs; tubercles, when co-existent in the lungs and in other parts of the body, are invariably most advanced in the former—whereas, in the latter, the degree of their developement is usually equal. Tuberculous deposition almost invariably commences in the upper lobes of the lungs; it is found more frequently on the left than on the right side: simple bronchitis commences at the base of the lungs, pursuing a course inverse to that of phthisis: chronic peritonitis generally indicates pulmonary tubercles: large vomicae are generally nearer the posterior than the anterior surface of the lobes of the lungs. These and other results of Louis' researches speedily attracted the attention of his cotemporaries; and, although they were contradicted and cavilled at on their first announcement, their truth and value have been since very generally admitted, and have tended to establish the reputation of the author, as one of the most eminent pathologists and physicians of modern times.

For the last five years he has been physician to the Hospital of La Pitié,

and we are informed by Dr. Cowan, that by far the greater number of the advanced students in Paris (principally English, American, and German) have of late deserted the clinique of M. Broussais, and now follow the visits and lectures of his pupil. The distinguishing excellency of the system of instruction pursued by M. Louis is the minute and comprehensive accuracy which he practises in examining and describing every particular of a disease; all the symptoms with which it is accompanied during life; and all the phenomena which are revealed by the dissection of the fatal cases. He does not limit his enquiries to one function, or to one set of functions, although it may seem, from the prominence of certain symptoms, to be more particularly affected; he interrogates all; and the same method he follows in conducting the post-mortem examinations. Not a viscus or part of a viscus, escapes his minute observation, and a careful record is kept of the state, whether abnormal or not, of each; for he is well aware that negative information is sometimes, especially in medical science, almost as valuable, as that which is directly affirmative.

It is proper to remark at the threshold of our enquiries, that in the following observations we limit the term "phthisis" to denote the genuine tubercular disorganization of the lungs. The symptoms of consumption may indeed be induced by other morbid changes of these organs, but certainly in a vast majority of the cases of this most fatal malady, the assertion of M. Lænnec is strictly true, that the "existence of tubercles in the lungs is the *cause*, and constitutes the special character of phthisis." The division of the disease, suggested by Bayle, into the tuberculous, granulated, cancerous, melanotic, calculous, and ulcerous species, is, to say the least of the proposal, quite unnecessary. Some of these forms are of very rare, if not of very doubtful occurrence; and even when the organic lesion designated by the epithets have been discovered on dissection, they have been found very generally to be coexistent and associated with tuberculous depositions.

The terms "dyspeptic phthisis," "hepatic phthisis," and such like, involve a most erroneous doctrine. No malady of the stomach or liver can give rise to the symptoms of genuine phthisis. Phthisis may be preceded and accompanied by dyspepsia or hepatic derangements, and these diseases may predispose to a tubercular cachexia of the system, and thus may be said to induce pulmonary consumption; but to talk of the dyspeptic forms of consumption, &c. is logically improper and practically mischievous.

M. Broussais, and perhaps the greater number of the older physicians, have contended that genuine pulmonary phthisis is not unfrequently the consequence of simple chronic inflammation and suppuration of the bronchi or of the texture of the lungs, and that the existence of tubercles is by no means a necessary and essential adjunct. The great improvements which have within the last twenty years been introduced into the diagnostic department of practical medicine, independently of the more obvious features (obvious at least, and readily recognised by the experienced physician) of what we may call pseudo phthisis, are now almost universally acknowledged to afford sufficient data, to enable him to distinguish the tuberculous from any other admitted form of the disease. When we call to mind the perplexing uncertainty which so often hung over the diagnosis, and consequently the prognosis in cases of suspected consumption, before the time of M. Laennec, we cannot too highly estimate the value of his admirable

labours. True it may be that he has not taught us how to cure the disease, when once it is fairly established. But this he has done; he has shewn us how to recognise its existence in its earlier periods when judicious remedial means may do much in preventing its increase and exacerbation, and by pointing out the almost demonstrative signs of the disease in its confirmed stage, he has taught us the almost equally important lesson, of knowing when we should not do too much, and when our efforts must be limited to the soothing of the mind of our patient, and the mitigating of those bodily sufferings which are inevitable, and beyond all hopes of cure.

It is not our intention at present to enter upon the subject of phthisis in all its bearings, and to describe its causes, symptoms, pathology, and treatment. This would be far too extensive an enquiry; and we shall therefore select only a few of its more interesting branches.

The researches of M. Louis having been directed more especially to the morbid anatomy of the disease, we propose, in the first place, to give an analytic review of these; then to consider the very curious subject of perforation of the lungs connected with tubercular deposition; and afterwards direct our readers' attention to some of the more important forms which consumption is apt to assume in different constitutions, and under different circumstances, describing the more prominent characters of each during life, and the more remarkable appearances found on dissection.

To those who may wish to be made acquainted with a succinct history of the disease, we most strongly recommend an attentive perusal of Dr. Clark's excellent treatise.

They will find in it an admirable resumé of all the more recent investigations and discoveries; and it is every where pervaded with the soundest practical wisdom. It is the work of a physician who has studied the disease attentively at the bed-side of his patient, with a mind unseduced by vague theory or partially to an exclusive system, but nevertheless richly stored with whatever is valuable and good in the writings of those who have preceded him.

MORBID ANATOMY OF PHTHISIS.

Lungs.—The genuine pulmonary tubercles are almost always found associated with another morbid formation, which is known to the readers of Laennec by the name of "miliary granulations." These granulations are small, inorganized, homogeneous, shining bodies, of marked consistence, of a greyish or ash colour, more or less rounded, and varying in size from a pea to that of a millet-seed." M. Louis has called them "granulations grises demi-transparentes." That they are the incipient forms of genuine tubercles, is made very probable from the following considerations:—At a certain period of their development, they exhibit a yellow opaque point at the centre, and this feature is more conspicuous in those which are found near the summits, than towards the basis of the lungs. In examining the lungs from below upwards they were generally found in the following order. 1st. Grey-semi-transparent granulations;—2dly, Granulations more opaque, and of a yellowish colour towards the centre;—and 3dly, Granulations of a yellowish white in their whole extent, that is, completely tuberculous. As

in the case of the genuine tubercles, the granulations are always more numerous and of a larger size in the upper than the middle and lower lobes. These two morbid depositions are, as we have already stated, almost invariably found together in the same lung. M. Louis has in his very extended and minutely exact experience met with two cases only, in which tubercles existed, without any of the grey semi-transparent granulations; and not more than five cases in which these granulations were not associated with genuine and fully formed tubercles. It seems, therefore, extremely probable, that the grey granulations are the primary forms of tubercles, and that they become converted into these during the progress of the disease.

The granulations are sometimes scattered singly throughout the pulmonary tissue; at other times, they are clustered together in masses of greater or less extent. A case is detailed, in which these masses were of two and three inches in volume. In the middle of these masses, a number of miliary points having a character, more or less distinctly tuberculous, are usually observed; another fact, which tends to prove the connexion between these two forms of organic lesion.

The grey matter has been found in other organs besides the lungs; but it must be confessed, that this is of rare occurrence. Louis has met with two examples of it only. In the following case, he discovered it in the substance of the omentum and mesocolon. The patient, a man 27 years of age, of weak constitution, died before the phthisical symptoms were fully confirmed. The cough was generally very feeble; the expectoration never abundant, nor distinctly purulent. Auscultation could not detect any trace of pectoriloquy or of metallic tinkling. The abdomen was more or less voluminous, with occasional uneasiness. No colic pains at any time were felt, but a troublesome diarrhœa frequently recurred.

The emaciation was very rapid; but to the last day the patient perambulated the wards of the hospital. On rising to the night-stool, he fell back and expired. On dissection, both lungs exhibited masses of grey tuberculous matter, larger and more numerous in the upper than in the lower lobes. There was no excavation, and the surrounding parenchyma was healthy. The omentum "formed a mass from twelve to fifteen lines thick, uneven, alternately yellow and blueish in colour, composed of the tuberculous and grey semi-transparent matter. The former occupied four-fifths of the mass, and was nowhere softened. The meso-colon and meso-rectum presented the same alteration, but were only half as thick as the omentum. The greater number of the mesenteric glands were tuberculous."

M. Louis appends the following remark:—

"This observation is interesting on several accounts. With regard to the tuberculous matter it presents a solitary example, in our own experience, of its equal development in the lungs, mesentery, omentum, &c. &c., while, in our other observations, it was always further advanced in the lungs than any where else. The thoracic and abdominal symptoms were in harmony with the morbid condition of the organs.

The re-union of a certain quantity of the grey semi-transparent matter with the tubercular in the omentum, is an additional argument in favour of their mutual connection." 100.

But while we contend for the very intimate relation between the grey semi-transparent deposit and the genuine tuberculous formation in the case

of the lungs, we must admit that even in them, the latter of these two changes may sometimes be developed primarily and without the antecedence of the grey granulations.

"The identity of the grey semi-transparent granulations with tubercle, has been a source of much discussion. Bayle thought them cartilaginous—Andral (*Clin. Med.* vol. iii. p. 5,) indurated pulmonary vesicles—Chomel (*Dic. de Med.* vol. x. Article 'Granulation') says they are *not* tubercles, but withholds his reasons. Bouillaud seems to agree with Andral, Lombard entertains a very similar opinion, &c. We only mention these hypotheses to attract the readers attention to the evidence adduced by our author; it is we think conclusive, and coupled with other facts distributed throughout this volume, demonstrates some *necessary* relation between these two alterations, as strongly, as it is in the power of facts to witness in favour of two things which are not *absolutely* identical. (Translator.)"

We have already alluded to the important fact of the upper lobes of the lungs being almost always affected with tuberculous disease, in preference to the lower. Indeed the very apex of the upper lobes is the part which is usually most early and most extensively tuberculous.

Large excavations are almost exclusively found in the upper lobes; and it is of very rare occurrence, that even a small vomica is discovered in the lower lobes, when the upper ones are altogether exempt.

Another important feature of tuberculous deposition is, that it appears to take place more frequently on the left, than on the right side. We admit that in a large majority of cases, both lungs are simultaneously diseased. M. Louis has however met with a few examples of tubercles having been limited to one side; five times to the left lung, and twice only to the right. He has also found excavations to be more frequent on the left than on the right side; out of eight cases of vomicae which had opened into the cavity of the pleura, seven were observed on the left side. This opinion, as to the greater frequency of tuberculous deposits in the left lung, is contrary to the experience of M. Laennec (*vide* Forbes' Translation, p. 282,) but in unison with that of Dr. Stark (*Medical Communications*,) and also of Dr. C. Smyth, who deduces his opinion from an examination of the cases in the works of Bonetus, Morgagni and others.

With respect to the portion of the lobe, or lobes, affected with tuberculous deposits, the following observations of our author deserve to be generally known.

"The great tuberculous excavation of the upper lobe were nearer the *posterior* than the anterior edge of the lung, and in many instances we have found their sides in the former direction, almost wholly formed by a false semi-cartilaginous membrane, from a line to a line and a half in thickness, enveloping the summit of the organ. Inferiorly, they were sometimes only separated from the pleura which covers the interlobular fissure, by a thin layer of pulmonary tissue, more or less modified—(*Obs.* 28,)—or there was a perforation of their parietes in this point, and communication established between another excavation, situated in the inferior lobe and posteriorly; for it is worthy of remark, that in no one instance have we met extensive excavations in the centre of the lower lobe." 10.

Before leaving the subject of tuberculous lesions of the lungs, it is necessary to allude to an opinion maintained by M. L. as the result of his extensive pathological enquiries, which is opposed to the doctrines of Laennec.

Andral, and some other distinguished physicians. Our author says "in no one instance have we met, surrounded by *healthy* pulmonary parenchyma, with cavities communicating with the bronchi, and lined, as are tuberculous excavations of long standing, with a false membrane of a light grey colour, semi-cartilaginous and semi-opaque;" and he adds, "we have also failed to meet with those masses of condensed cellular tissue, in which the bronchial ramifications, more or less dilated, terminate, and which are considered by Laennec as the cicatrices of tuberculous cavities."*

He is however too candid and enlightened an observer to call in question the authenticity of the observations made by such an anatomist as M. Laennec, who has recorded several instances of *vomicæ* having been found to be surrounded by healthy pulmonary parenchyma in the bodies of patients who had presented the symptoms of phthisis during a space of time more or less considerable; and "judging from the structure of these cavities it would be difficult not to believe that tuberculous softening preceeded their formation."

In the work of Laennec, Andral, Cottureau, (*Essay on Chlorine Inhalation*) our readers will find numerous cases adduced to prove the cicatrization of tuberculous excavations, and the formation of a fibro-cartilaginous membrane, when the cavity has not been obliterated. We have however no doubt, but that many cases of cicatrised *vomicæ*, which have of late years been recorded, are of very doubtful authenticity. The error of mistaking every puckered depression on the surface of the upper part of the lungs, has been, we fear, very often committed, even by some of the best authorities on pathological anatomy. These depressions do not always depend upon any determinate lesion. They were frequently observed, when the texture of the lungs was healthy, or only slightly indurated to a small depth, immediately beneath the pleura. In other cases they were found associated with crude tubercles, small excavations, or osseous concretions in the summit of the lungs.

Pleuræ.—No other morbid phenomena (not including the tubercles themselves) are of such frequent occurrence in dissections of phthisical patients, as adhesions of greater or less extent, between the surfaces of the pleuræ. In 112 cases, there was only one in which both lungs were free in the whole

* "These results are singularly negative, when compared with those of M. Laennec, Andral, and others, who bring forward *copious* and *undeniable* evidence of cicatrization of tuberculous excavations, and the formation of a fibro-cartilaginous membrane, when the cavity is not obliterated. It must be recollected that M. Louis never forces his conclusions beyond the number of facts he is analysing, and it is remarkable that not one of these has presented an example of cicatrization; this inclines us to suppose that the presence of a cicatrix has often been hastily admitted; a supposition confirmed by the succeeding observations of our author. That a tuberculous excavation is *ever* capable of cure is an important fact, and highly calculated to encourage us in the research of means calculated to arrest this hitherto most destructive affection. Vide Andral, *Clin. Med.* vol. iii. p. 382; Laennec pp. 299, 323—and notes by Dr. Forbes. Cottureau, in his *Essay on Chlorine Inhalation*, adduces also some incontestable facts.—(Translator.)

of their extent: in eight cases the right lung, and in seven, the left one, did not adhere at any point of their surfaces. In all of these cases there were either no tuberculous excavations, or if there were, they were only of very small dimensions. The extent and firmness of the adhesions were very generally proportionate to the number and size of the tuberculous excavations in the lungs. The observations of M. Louis on this subject cannot be advantageously abridged.

“There was evidently some relation between the extent of organic alteration and the pleural adhesions; if the latter were absent, there were neither large nor middle-sized excavations, and in general, none whatever. Were they weak and limited in extent, the cavities were generally very small, and sometimes altogether wanting.

Lastly, where the adhesions were dense, extensively distributed or even universal, they *always* indicated excavations in the lungs, and in the great majority of cases, that those excavations were large, or at least of considerable size.

The proportion which existed between the size of the tuberculous cavities and the adhesions, demonstrated the influence of the first upon the second. The large excavations constantly occupied the summit of the lungs, approximated closely to their surface, and there only, were found those dense resisting false membranes, which we have already described as either strengthening the sides of the cavity or constituting them entirely. This mutual relation between cavities and adhesions is also pointed out by other facts. Thus, in two cases where the lungs presented only two masses of tuberculous matter immediately beneath the pleura, the adhesions were confined to these points, and were formed by cellular prolongations of corresponding extent.” 29.

A pathological phenomenon of much interest, but of very rare occurrence, is the deposition of genuine tuberculous matter in the false membranes, between the surfaces of the pleuræ. Under such circumstances, the false membranes are found not unfrequently to have acquired quite a cartilaginous firmness. They are usually observed, enveloping the summit of one, or of both lungs. From the frequency of pleuritic attacks in the last stage of pulmonary phthisis, (M. Louis observed it in one tenth of his cases): a very common appearance on dissection is a layer of soft yellowish coagulable lymph at some point, or points of the pleura, which has been evidently of very recent deposition; within from 4 to 18 or 20 days preceding death.

An effusion into the cavity of the pleura of a clear fluid, in quantity from a pint and upwards, was found in one tenth of all the cases. The effusion had in most instances taken place very rapidly. “Of this,” says M. Louis, “we were convinced in two instances, where the thorax gave every where a clear sound on percussion thirty-six hours before death, but where two pints of fluid were afterwards found in one side of the chest.”

Trachea.—The most frequent lesion of the trachea in phthisis, is ulceration of its mucous membrane, with, or without an inflammatory redness of its surface. It was observed in 31 out of 102 cases examined. When the ulcers are small, they are usually scattered throughout the circumference of the air-tube, are of a round or oval shape, and vary from a line to a little more or less in diameter. From their edges being flat, and their bases being formed by the cellular tissue slightly, or not at all thickened, they often appear as if they had been artificially produced; and hence they have escaped the attention of many pathologists.

The ulcerations are usually more numerous, and of a larger size in the lower, than in the upper half of the trachea.

The large ulcerations are more scattered and apart from each other than the smaller ones, and they are very generally found on the posterior fleshy part of the tube.

A certain number of the cartilaginous rings were sometimes completely denuded, diminished in thickness, and either partially or *wholly* destroyed. This last alteration we have only observed twice; while we have seen in five cases the complete destruction of the mucous membrane of the trachea, throughout almost the whole extent of its fleshy portion." 32.

The symptoms of ulcerated trachea are very obscure. Pain, accompanied with a sense of burning, and of an obstruction, just above and behind the sternum, was experienced in a few of the cases. Sometimes the pain and uneasiness were referred by the patient to the larynx, although this part was exempt from the disease, and the trachea only was ulcerated; just as we observe that the pain in cystitis is very often felt in the extremity of the urethra, and not in the seat of the disease.

The distress in the breathing, the cough, and the expectoration presented no peculiar, or pathognomonic characters. In one case in which the whole length of the windpipe, from the epiglottis, including this appendage, to the termination of the trachea, exhibited patches of deep and extensive ulceration, so that even some of the cartilaginous rings were denuded, and others were more or less completely destroyed, no prominent symptoms were present during the life of the patient.

Simple inflammation of the mucous membrane of the trachea is more frequently accompanied with pain and a sense of heat in the affected part, than ulceration is.

Larynx.—The ulcerations of this portion of the windpipe are less frequent than, but are very rarely unaccompanied by, those of the trachea. They were found in 22 out of 102 cases.

"Seldom superficial or presenting the appearance of artificial formation, they were generally of a certain depth, more or less irregular, and from one to two lines broad. Their edges, of variable consistence, were sometimes lardaceous, of a greyish or whitish colour. The mucous membrane was pale and perfectly sound in the rest of its extent.

"The most frequent seat of these ulcerations was, first the junction of the vocal cords, where they were sometimes superficial; then the vocal cords themselves, especially their posterior part; we have only once observed a very small ulceration at the base of the arytenoid cartilages, the superior part of the larynx, and the interior of the ventricles.

In some instances, one or more of the vocal cords were completely destroyed, and the base of the arytenoid cartilages was laid bare. When this was the case, the cartilages themselves were unaffected." 34.

The signs, during life, of ulcerated larynx are much more obvious and uniform than those which accompany ulceration of the trachea. They vary according to the part of the tube affected, and also according to the depth and extent of the ulcers. When the chordæ vocales, the ventricles, or the arytenoid cartilages were the seat of disease, hoarseness, with more or less alteration of the voice, pain, sense of heat and pricking, and subsequent aphonia, were generally present. The pain was sometimes very acute, pun-

gent, and lancinating, and, in most of the cases, it was exasperated by coughing, speaking, &c.

Epiglottis. The morbid appearances of this appendage have hitherto been overlooked in the examination of phthisical bodies, although ulcerations of its surface are almost as frequent as are those of the larynx. They were seen in 18 out of 102 cases. The cause of this omission, M. Louis rightly ascribes to the circumstance of anatomists seldom examining attentively any organs, except those whose functions are obviously disturbed during the life of the patient. Although occasionally found alone, the ulcerations of the epiglottis are, in most cases, associated with similar lesions of the larynx and of the trachea; out of eighteen observations, in which ulcerations of the epiglottis were found, in six only were the larynx and trachea exempt from them. They are almost always confined to the lower surface of the valve—once only has M. Louis found them on its upper or lingual surface.

“In some cases the mucous membrane of the epiglottis was destroyed over the whole extent of the inferior surface. In others, the cartilage was destroyed in portions of its circumference, giving a festooned appearance to the epiglottis. This we have seen four times. A fifth case has presented an example of complete destruction of the epiglottis.

We have in no one instance discovered tuberculous granulations in the substance or on the surface of the epiglottis, larynx, or trachea; inducing us to believe that we ought to consider inflammation as the most frequent cause of the ulcerations.

Another fact of importance to remark is, that these ulcerations were twice as frequent in men as in women. Thus, in an equal number of cases, the women only presented six examples of this state of the epiglottis, seven of the larynx, and nine of the trachea, out of eighteen, twenty-three, and thirty-one cases; and as the proportion is nearly equal for three kinds of ulcerations, it is probably not the effect of hazard.” 35.

The symptoms of ulceration of the epiglottis, although often obscure and unsatisfactory, may be stated to be, a fixed pain in the upper portion of, or immediately above, the thyroid cartilage, soreness of the throat, hoarseness, and a greater or less degree of dysphagia, and which increases so much during the progress of the disease, that in the effort of swallowing, fluids are perhaps rejected by the nostrils, the pharynx and tonsils remaining healthy all the time.

In one case, in which the epiglottis, the lateral ligaments, and the superior vocal cords were found completely destroyed, the succession of the symptoms was well marked. At first, the voice was hoarse, unequal, and discordant; a lancinating pain was felt between the thyroid cartilage and the os hyoides; this was increased by any exertion of the vocal organs, by flexion of the neck forwards, and by deglutition; the latter was frequently difficult, and provoked the rejection of fluids by the nose. Towards the close of the case, the pain in the neck became more severe, and the deglutition so distressed that no solid food could be swallowed: complete aphonia had supervened. The progress of the symptoms in this case had been slow and constant—the rejection of drinks by the nostrils had existed for four months preceding the death of the patient; and the acute local pain had been felt during the whole of this period. It is, however, to be remembered, that these symptoms are by no means of invariable occurrence, even when the

destruction of the epiglottis is complete. Majendie relates two such cases, where deglutition was not at all impeded.

Having thus treated, at considerable length, of those structural lesions of the respiratory organs which have been observed by M. Louis in the bodies of those who have died of genuine phthisis, we proceed to lay before our readers an analysis of his researches on the morbid changes in the other organs of the body; and first with respect to those in the **CIRCULATING SYSTEM**.

Heart and Pericardium.—The opinion which has been held by some physicians, that phthisis is one of the causes of aneurism of the heart, is contradicted by the experience of M. Louis. In 112 cases, there were only three in which he detected any increase in the size of the heart. This increase was confined to the left ventricle, and none of the patients had experienced, during life, the symptoms of hypertrophie, or of dilatation of the heart. "In the great majority of cases, the heart was under its usual dimensions, being not more than one-half or two-thirds of its natural volume." Dr. Clark has stated, in his work on Climate, that he considers a small, feeble heart to be a strongly predisposing cause of consumption; whereas M. Broussais says that he has observed hypertrophy of the heart to be sometimes the cause of phthisis, and yet that it may become atrophied, in the progress of the disease, with the other organs.

The latter clause only of M. Broussais' observations is confirmed by the experience of M. Louis, who distinctly asserts that, "all that we can possibly conclude respecting the influence of phthisis on the heart is, that its volume is diminished in common with that of the other organs." The truth of this remark is amply confirmed by the fact, that the heart is very often found to be diminished in volume after other chronic diseases, as well as after phthisis. M. Louis found it smaller than natural in 30 out of 80 such cases; a higher proportion than in phthisis. After organic affections of the stomach and uterus, this diminution was more frequent, and more strongly marked, than after any other diseases.

Effusion of serum into the cavity of the pericardium was found in one-tenth of the cases of phthisis examined by M. Louis.

The morbid appearances observed in the aorta are not sufficiently frequent in their occurrence, nor uniform enough in their characters, to be entitled to much consideration in the pathological history of pulmonary phthisis. The internal surface is sometimes of a deeper red than usual; and, at other times, we meet with various organic changes, which are, however, quite as common after other chronic diseases as after phthisis.

The organs which next claim our attention, are those which belong to the **DIGESTIVE SYSTEM**.

The state of the *pharynx* and *oesophagus* need not detain us a moment, as "they were almost constantly healthy." The *stomach* much more frequently presents some morbid phenomena. M. Louis believes that this organ is enlarged in volume more frequently after phthisis than after any other chronic disease, and he is inclined to regard this change "as the consequence of repeated shocks caused by the cough." But surely this is rather a fanciful opinion; and his translator has, with much propriety, expressed his dissent in a foot-note, arguing that the explanation offered by

M. L. is improbable, "both from the physical laws which regulate the abdominal cavity, and the fact that in phthisis the cough is not so violent, or so protracted, as that accompanying some other thoracic affections." The lesions of texture usually found in the stomach after phthisis are certain alterations of its mucous membrane.

"This was both thinned and softened—sometimes even destroyed; in other cases it was more or less red, and occasionally thickened in its anterior surface; while again in others the redness, accompanied by considerable softening, existed only in the left extremity. Ulcerations were sometimes found; but more frequently there was a remarkable *mamillated* appearance of the mucous membrane." 44.

Our limits forbid us from entering upon the minutely detailed descriptions of these several lesions, given by M. Louis. The pathologist will be amply rewarded by diligently perusing them at his leisure. We can afford room for one short extract only. "The stomach was more or less morbidly affected in four-fifths of the cases of phthisis, and in not more than one-half of the cases of other chronic diseases. It may also be noticed, that while in phthisical patients the most considerable morbid change, (*viz.* softening, with diminished consistence, and sometimes destruction of the mucous membrane,) was one of the most frequent, the contrary was the case in those who died from other diseases."

The pathology of the *small intestines* in phthisis offers a much more extensive and more important theme of reflection than that of the stomach, from the great frequency and gravity of the morbid changes which they present. Of these changes, by far the most common is ulceration affecting the mucous follicles, and the surrounding mucous and cellular textures. Louis has detected it in five-sixths of the cases which he has examined; a proportion which is higher than what is admitted by MM. Bayle and Andral, but which he thinks will be found to be strictly correct by succeeding enquirers, if they will employ sufficient time and attention in properly cleansing the small intestines, (the jejunum and ileum: the duodenum is very rarely the seat of this, or of any other lesion), and in scrupulously examining them throughout their whole extent. The portion of the gut most frequently affected with these ulcerations is the lower half or two-thirds of the ileum. "When small they are almost exclusively situated opposite to the mesentery, in points corresponding to the aggregated glands (*glandulæ Peyer*) which were themselves destroyed. In their maximum of development, they occupied the whole circumference of the intestine." The shape of these ulcerations is generally found to vary according to their size: they are rounded, when small; and more elliptical, corresponding to the shape of the clustered glands, when of larger dimensions. They are sometimes, although very rarely, lineary.

"The large ulcerations were frequently the result of the junction of smaller ones; a fact easily demonstrated when the latter were numerous and situated among the agminated glands. There might then be observed softened tubercles, with small circular ulcerations, separated by entire or partially destroyed bands. In others, no remnant of these divisions remained, the cellular membrane was completely denuded, more or less thickened, and presenting small round shaped depressions of variable depth, corresponding no doubt to the partial ulcerations just described. Lastly, in a third division of similarly formed

ulcerations, the sub-mucous layer was either in part or wholly destroyed, and the muscular coat denuded, uneven, and thickened." 62.

These ulcerations are usually preceded by enlargement and induration of the two sets of glands, the solitary and the aggregate, which are distributed along the inner surfaces of the small intestines. M. Louis applies the term "granulations" to these enlarged mucous glands. He describes two sorts of them; one presenting all the characters of tuberculous matter, the other being harder, whiter, and having a cartilaginous aspect. Their size varies from that of a small shot, or even of a pin's head, to that of a common pea. They are almost invariably accompanied by ulceration. The semi-cartilaginous granulations are in general much more numerous than the others; they were sometimes seated among the aggregated glands, but more frequently in the intervals between the different clusters. M. Louis observes that they are situated immediately beneath the mucous membrane, and never among the fibres of the muscular tunic. When these granulations become ulcerated, the edges of the ulcers are indurated, white, and opaque, "retaining," says M. L., "almost exactly the characters of the tumor to which they succeeded: thus pointing out the nature of their cause." The other sort of intestinal granulations, the tuberculous, differs in some important respects from the cartilaginous sort. They are admirably described in the following paragraphs:—

"These were also situated either round the ulcerations, in their centre, or in the interstices of the muscular fibres; between these and the peritoneum;—among the agminated glands or in their intervals: and were almost constantly more numerous near the cœcum than elsewhere. We have never found them near the duodenum.

These granulations were succeeded by small ulcerations, produced by the same process as are tuberculous excavations of the lungs. The tuberculous matter gradually softened, and the mucous membrane was proportionably red, thickened and softened in the corresponding point; if destroyed, the contents of the abscess were emptied on the intestinal surface, so that inflammation of the mucous membrane was here an effect and not a cause of tubercles.

We have never seen tuberculous matter occupying the intestinal mucous membrane under any other form than that of granulations." 59.

In concluding our remarks on the subject of intestinal granulations in phthisis, it is worthy of notice that they are less frequently observed than the ulcerations described in the preceding page. They existed thirty-six times in ninety-five cases, whereas the ulcerations were found seventy-eight times in the same number. Whether the ulcerations are ever quite independent of any previous enlargement of the mucous follicles, has hitherto not been satisfactorily determined.

The other lesions of the small intestines, which are found after phthisis, such as softening of the mucous membrane, thickening of this membrane, the occurrence of small tuberculous abscesses, (independent either of granulations, or ulcerations,) are of minor importance, and need not detain us. All of them, and indeed we may add to the number, the semi-cartilaginous granulations, are found (but certainly not so frequently) after other chronic diseases, as well as in phthisical cases; whereas the tuberculous granulations and ulcerations are peculiar to phthisis.

"We have never," says M. Louis "observed these last-named lesions, except

in phthisis; and if it is not rigorously correct to say that ulcerations of the small intestines are exclusively found in this affection, exceptions are so rare, that the proposition is almost literally true.”*

Dr. Cowan informs us that, during the eight years which have elapsed since the publication in France of the present work, M. Louis has not examined a single subject who died from a chronic disease, and presented ulcerations in the small intestine, in which he did not find co-existent tubercles in the lungs.

Large Intestine.—The lesions of this portion of the alimentary canal are similar, with the exception of the cartilaginous granulations being never found, to those which we have described, as occurring in the small intestines. The mucous coat was sometimes found unusually red, the redness being either in patches, or for a continuous surface of considerable extent. This appearance almost always coincided with marked softening, and very frequently at the same time with a thickened state of the membrane, a condition, which, it can be scarcely doubted, has an inflammatory origin.

The red and softened mucous membrane presented very often a mamillated appearance; sometimes innumerable minute abrasions; and in other cases, a continuous surface of many inches similarly abraded; an appearance which might have readily escaped notice, in consequence of the submucous tissue having a slightly faint tinge, and thus resembling the healthy mucous surface. In one eighth of all the cases examined, tuberculous granulations were found in the large intestines. These were situated either in the centre, or round the circumference of the ulcerations, and seldom or never in their intervals. Ulcerations were nearly as common in the large, as in the small intestines. Usually they were of a small size—from three to six lines, or thereabouts, in diameter, rounded, and, with flattened edges, so that they looked as if they had been artificially produced. In a few cases, the whole length of the large intestine, presented an infinitude of minute ulcerated points, so indistinct that they might be readily overlooked by an ordinary observer. When the ulcerations were numerous, and the intervening mucous membrane was more or less thickened, the general aspect very much resembled the chapped integuments of the hand. The larger ulcerations were of a more irregular shape, and their edges were dentated, or radiated. Sometimes they were of so large a size that not only the whole circumference of the gut at one or more points, but even a longitudinal space of from six to nine inches in extent was occupied with these ulcerations.

The largest were usually observed in the cæcal and in the ascending portions of the gut. In the rectum, they were never found larger than from an inch and a half to two inches in length. The relative frequency of ulcerations (including the small and the large) in the different portions of the large intestine, viz. the cæcum, ascending, transverse, descending colon and rectum, may be stated by the following figures: 34: 37: 25: 8: 32:—that is, in the same proportion of cases, they are almost equally common in the cæcum and rectum. The concluding observations of our author are not

* It is to be observed that M. Louis's remark is applicable only to chronic diseases. He does not include typhus fever.

only so practically valuable, but afford, at the same time, so just a commentary on the leading doctrines of the Broussaian school, that we must find room for them, although the extract is a long one.

“Intestinal ulcerations were often, at least in their origin, independent of inflammation. This was evidently the case with a great number of those in the small intestine, the result of softened tubercles; for the development of the latter could not be attributed to inflammation, since so long as they remained unsoftened, the mucous membrane covering them, continued healthy. Far from being the cause, the inflammation of the mucous membrane was, as we have already seen, subsequent to the presence of the granulations. The same remark is equally applicable to some cases of ulceration of the large intestine.

Where softened tubercle could not be considered the cause, it would still be difficult to regard ulceration as simply the effect of inflammation, which does not usually take place in isolated patches on a mucous surface. Of this fact we have, we think, afforded an example, when speaking of the softening with redness and thickening of the mucous membrane of the colon, which almost invariably extends to its whole surface. As to the small intestine, we will remark, that while distinct traces of inflammation are much less common than in the colon, its ulcerations are still more frequent; and that where inflammation appeared to be the cause, it had still a peculiar character, being most generally bounded to the portion of mucous membrane occupied by the agminated glands.

These reflections are strengthened by what we have said respecting the extreme rareness of the ulcerations of the small intestine in all chronic diseases except phthisis; while simple inflammation of the mucous membrane is quite as frequently observed in one case as the other.” 72.

Lymphatic Glands.—Tuberculous deposition in some of the clusters of these glands is of frequent occurrence after phthisis, (having been found in a fourth of all the cases examined by M. Louis) and is according to his researches indicative of, or peculiar to, at least in patients of 15 years and upwards, this disease.*

In several hundred dissections of cases, which have proved fatal from other chronic maladies, (and in many of these, the intestinal mucous membrane was extensively inflamed and ulcerated), our author has not met with a single instance of tuberculized lymphatic gland.

Whenever, therefore, he detected this lesion, he assures us, that his prediction of the lungs being similarly affected, was invariably verified by the post-mortem examination. That the morbid change in the glands is very generally preceded by a corresponding change in the lungs, is made probable by the circumstance of his always finding that the tuberculous matter was more advanced in the lungs than elsewhere, and that when tubercles co-existed at the same time in different parts of the body, these were almost constantly at the same degree of development.

The mesenteric lymphatic glands are more frequently tuberculized than any other groupe. M. Louis found them diseased 23 times in 102 cases

* From the enquiries of M. M. Andral and Lombard, it is made evident that tubercular disease of the lymphatic glands, including the external, as well as the internal groupes, is not only much more common in infants and young children under 12 or 15 years of age, than after that period of life, but also, that it is more frequently independent of, and unassociated with the existence of pulmonary tubercles, in the former, than in the latter class of patients.

In the majority of cases the change did not affect the whole substance of the glands, but was partial and disseminated in points through their substance, which was usually redder and softer than in health. The grey semi-transparent matter is very rarely seen in these or in any other glands, the deposition of the genuine yellow tuberculous matter appearing to take place primarily and independantly of any antecedent change. The tuberculous matter is rarely found to be in a softened condition in diseased glands. In every instance where the mesenteric glands were tuberculous, ulcerations of the intestines were found; and as these ulcerations were most common, in the lower portion of the ileum, and in the cæcal portion of the large intestine, the glands in the adjoining mesentery were oftener found diseased, than any others.

The lumbar, cervical and axillary groupes of glands were more or less tuberculous in about one-tenth of the cases examined; and, as in the case of the mesenteric glands, they were not unfrequently found merely enlarged, and of a variably intense red colour, without any positive degeneration of texture.

We might have expected that the cervical glands would have been more commonly affected, considering their proximity to, and connexion with the primary seat of the disease, than they appear from the tables of M. Louis to be. His inference from this fact is therefore probably quite correct, that "tuberculous transformation must be viewed as depending upon some other cause than the inflammation of the corresponding mucous membrane." With respect to the state of the bronchial glands in phthisis, M. Louis informs his readers that, he is not prepared, from his own personal observations, to state accurately the character and frequency of their lesions in phthisis. M. Lombard, in his *Essai sur les Tubercles*, has in some degree supplied this deficiency. From his tables, it appears that these glands were found diseased only nine times in 100 adult phthisical cases, and no fewer than eighty-seven times in the same number of cases occurring in infants and young children.

Liver.—The most frequent and most remarkable change of this viscus, in phthisis, is the fatty degeneration of its substance.

"It existed in one-third of the cases (40 out of 120). In this condition it was pale, almost always of a light brownish yellow colour, spotted with red, externally and internally. It retained its natural form; but its volume was nearly always augmented, and at times double its usual dimensions. This increase was almost invariably at the expense of the right lobe." 79.

The texture of the liver is usually much softened, so that it may be readily torn and broken down by the fingers. When the morbid change is recent and incomplete, its existence may be most easily shewn by placing a thin section of the liver on a sheet of paper, and exposing it to a gentle heat; the fatty matter is melted, and saturates the paper. In the more advanced stages, the scalpel and fingers of the anatomist are greased as by common fat. This fatty alteration of the liver is much more frequent in female than in male subjects. In forty-nine cases observed by M. Louis, ten only occurred in the latter. Age did not appear to have had any influence in predisposing to this lesion. Some pathologists have supposed that there was some connexion between the fatty change of the liver, and dis-

eased condition of the duodenum. The researches of our author do not confirm the accuracy of this opinion. He has not been able to discover any set of symptoms which are indicative, during life, of this morbid alteration of structure; but, as the increase in the size of the liver in cases of phthisis, (a very common occurrence,) is almost always owing to, or at least co-existent with, the fatty degeneration, we may expect very generally to discover the latter, in such cases, on the dissection of the body. According to the researches of M. Louis, it is almost peculiar to pulmonary consumption, and may, therefore, be regarded as somehow or other depending on this disease.

“ Out of 230 cases, nearly equally divided between acute and chronic diseases, we have only met nine examples of fatty liver; and among these nine, seven relate to patients who presented a certain number of pulmonary tubercles. By adding these nine cases to the forty already mentioned, we have forty-nine examples of this condition of the liver (and these include all we have collected during three years), out of which forty-seven were cases of phthisis. There are assuredly few phenomena of whose mutual dependence there is less doubt, and in confirmation of which facts are more unanimous.” 80.

All other organic lesions of the liver are extremely rare after phthisis. M. Louis has only twice remarked the deposition of tuberculous matter in its substance. When the liver was in a state of adipose degeneration, the bile was usually found of a viscid, treacle-like consistence, and of a very dark colour. But this condition of the bile is by no means pathognomonic of this morbid change of the liver; it is observed to accompany, although more rarely, other lesions of this viscus.

Spleen.—Genuine tubercles were found in this organ seven times in 90 cases, examined by M. Louis. They were very numerous, varied in size from that of a hemp-seed to that of a filbert, and exhibited all the characters of genuine pulmonary tubercles. The greater frequency of tuberculous deposits in the spleen than in the liver, is deserving the notice of the pathologist.

There was another sort of deposit occasionally observed in the substance of the spleen; it consisted of “rounded, yellowish, shining, elastic, moist granulations, very different from the tubercle.” The size of this viscus was occasionally larger, at other times smaller than in health. Its consistence was equally variable in different cases.

The Kidneys were perfectly sound in three-fourths of the cases. Three times only did they exhibit any tuberculous changes. The *bladder*, more or less contracted or distended, was never found diseased. Tuberculous matter was discovered in a very few instances, in the *prostate gland* and in the *vesiculæ seminales*, on the surface of the mucous membranes of the *ureters* and *seminal ducts*, and also in the substance of the *uterus* and of the *ovaries*. Its occurrence was occasional, but certainly very rare in any part of the *peritoneum* itself, or in the *false membranes*, which were not unfrequently found covering the *intestines* and the anterior parietes of the abdomen. In one remarkable instance, it was observed in the *omentum* and *mesocolon*.

Such is a brief summary of the more frequent and striking changes witnessed in the abdominal and pelvic viscera of patients who have died of phthisis. We shall now rapidly glance at those which have been discovered by M. Louis in the *brain* and its investing *membranes*.

None of the encephalic lesions, tubercles excepted, (and these are of very rare occurrence), are peculiar to, or indeed are more frequently observed after, phthisis than after other chronic diseases. The thickening of the arachnoid, the granulated state of this membrane near the falx, the softening of portions of the brain, and the partial effusions of serum, either between the membranes or within the cavities of the brain, are common post-mortem appearances in cases of protracted illness, and all of these lesions, we know, are compatible with the persistence of the mental powers in their full vigour. The occurrence of tubercular deposit in the substance of the brain, in adults, is so rare, that an abstract of the appearances, in the only case recorded by M. Louis, may be deemed interesting. The patient, a young girl aged 19, had suffered from violent headache, and there had been much drowsiness and occasional pervigilium.

Dissection. "At the posterior part of right hemisphere, the arachnoid was adherent to the dura mater, in a point corresponding to a nodulated tumour, developed near the surface of the brain, and about the size of a common nut. It was of a greenish-yellow colour, firm, in every respect tuberculous, and *not encysted*. Round it the cerebral substance was healthy. Between the upper surface and lateral ventricle of same hemisphere, five similar tubercles existed. On the left side there were four, and one of them occupied the posterior and inferior part of the opticus thalamus. At the base of posterior lobe of same side, a portion of the cerebral structure was transformed into tuberculous matter, under the form of a layer four lines thick, and an inch and a half in extent. It was partially adherent to the falx cerebelli, the corresponding layer of which had undergone the same alteration. Lastly, at the inferior part of left hemisphere of cerebellum, a non-encysted tubercle, about the size of a nut, extended to the spinal marrow, intersecting a certain portion of its substance." 112.

The lungs exhibited several vomicæ, and much tuberculous infiltration, and this last-mentioned change was seen in the cervical, axillary, and mesenteric glands, and also in the spleen; but no where, except in the lungs, had the tuberculous matter undergone any softening, or other ulterior development.

From the tenor of the preceding observations, the attentive reader will be prepared for the general conclusions respecting phthisis, which M. Louis has drawn from his extended experience. Tubercular deposit is, according to his views, the essential precursor or cause of the disease; and this morbid process invariably commences (in patients, at least, of 15 years and upwards) in the pulmonary structure. In not a single case, out of many hundreds, has he ever found tubercles in other parts of the body, when no trace of them could be detected in the lungs. To this pathological axiom we may add two others, viz. that, in every instance, the development of the tuberculous matter in the lungs was more complete, and farther advanced, than elsewhere, as, for example, in the spleen, intestines, prostate, &c.; and that, in these viscera, however distant and dissimilar from each other, the tuberculous matter was uniformly in the same stage or degree of development—"a coincidence which seems (says M. Louis) to indicate the existence of a common cause, acting at once on all these points, and which inclines us to believe that tuberculous deposition is independent of those occasional causes (he alludes to the existence of inflammatory or congestive action, which is supposed by Broussais, Andral, and others, to be an invisible and necessary precursor of this lesion) which we are apt to suppose active in certain cases."

These conclusions of our author are, it must be remembered, at variance in some degree with those which other enquirers of great eminence have drawn from their investigations. Andral appears to have found tubercles in various organs, when none could be detected in the lungs, more frequently than M. L. is willing to admit; and he objects to the reasoning of our author, that, because the tubercles of the lungs are almost always found further advanced and developed than those in other parts of the body, it follows, as a necessary consequence, that the deposition must have taken place primarily in the lungs, and consecutively only in every other viscus or tissue. The peculiar functions of the lungs, their more frequent exposure to irritating influences, and the unceasing movement to which they are subjected, may account for the greater rapidity of development, when the deposition has been once established. M. Lombard, of Geneva, in his ingenious *Essay on Tubercles*, has adopted similar views to those of M. Andral. He does not admit the supposed necessary co-existence of tubercles in the lungs, even in adult subjects, whenever these bodies are detected in other parts of the body. The question, therefore, is open for future investigation, and may and ought to be examined, and, if possible, speedily decided, by those physicians who have extensive opportunities of prosecuting pathological enquiries.

How is it that the English hospital physicians are such idlers in the vineyard of science? With the exception of Dr. Bright, we can scarcely mention one who has ever evinced any zeal, far less made any original contributions, to a cause, which has been so splendidly illustrated by the labours of Bayle, Laennec, Andral, Louis, and many others of the French school. Drs. Abercrombie, Carswell, and Hope, (who along with Dr. Bright have been by far the most meritorious among recent British pathologists,) are, or at least were not, when they published their respective works, attached to hospitals. Would that we could animate the functionaries of St. Bartholomew's, St. Thomas's, and some other of our metropolitan institutions, from the quiet slumber of their repose. They really should bestir themselves. It is "too bad" that while our hospital surgeons have honourably distinguished themselves among the writers of the day, our physicians (even although many of them have drank of the pure stream of professional knowledge from the Isis and Cam!) are little known beyond the boundaries of Middlesex. Let them remember that our medical literature does not possess one indigenous manual of morbid anatomy, except that of Dr. Baillie, published forty years ago; that we are obliged to be contented with translations from the works of our more active Continental brethren; and that even these translations have been but seldom undertaken by the very men, who enjoy the requisite opportunities of testing the accuracy of the author's assertions, we mean hospital physicians.

We now proceed to consider the highly interesting subject of

PERFORATION OF THE LUNGS, in connection with tubercular disease of these organs. The symptoms of this accident are almost always sufficiently prominent to announce the fatal mischief that has taken place. The sudden, or even instantaneous seizure of extreme difficulty of breathing, amounting, perhaps, to dread of immediate suffocation, the acute pain at one point of the chest, the appalling anxiety, the blanched features, and the weak or imperceptible action of the heart and of the arterial pulse, all these symptoms coming on when the patient is perhaps comparatively easy and free from suffering, may be considered as sure and positive signs of the lung having given way, and

having permitted the escape of the air, and it may be of some fluid also into the cavity of the pleura. In eight cases, which have occurred to M. Louis's observation, all the symptoms now enumerated were, with the exception of the pain being absent in a solitary instance, so strongly marked, as to lead him to form a correct diagnosis at the time. According to his experience auscultation and percussion may indeed confirm and render more accurate the opinion, which has been already determined from the rational symptoms, (and they ought therefore never to be omitted in the examination of such cases,) but these means are very seldom necessary to suggest the correct diagnosis originally. Three cases however are narrated by Laennec, in which the rational symptoms were obscure and very indistinct, and of which the true nature could not have been ascertained during life, had it not been for the assistance which was derived from auscultatory examination. The sound elicited by percussing the affected side of the thorax becomes unusually clear and resonant, in consequence of the escape of the air into the pleural cavity: the respiratory murmur is diminished, or altogether suspended; a blowing, or amphoric sound is in some cases heard to accompany each act of inspiration, and along with this sound the peculiar metallic tinkling also may be often perceptible. All these phenomena are however of uncertain occurrence; none is invariably uniform; and none therefore can be admitted as pathognomonic of the accident. The ruptured excavation may not at all, or may only imperfectly communicate with any of the bronchi; and under such circumstances, percussion does not avail, as no air has escaped into the bag of the pleura: and the amphoric sound and the metallic tinkling are also absent. The last-mentioned sign, the metallic tinkling, is in the majority of cases, not perceptible for several days after the accident has taken place, even although the ruptured cavity has a very free communication with the bronchi; and for this reason; that it is necessary to the development of this sound, that a certain quantity of fluid be present in the cavity of the pleura. Now this is seldom the case, while the contents of the vomica only have been effused; for these are in general too scanty. A degree of pleuritis being however immediately excited, the consequence of such an attack is an effusion of a sero-purulent fluid into the pleural cavity; and it is not until this period, that the metallic tinkling is heard. It is not easy to determine what quantity of fluid must be in the pleural cavity, before the tinkling can be perceived. Much may depend upon the consistence of the effused fluid, and probably also upon some other contingencies, which have not yet been well ascertained. In the history of perforation of the lung, perhaps no feature is more remarkable, than the great difference in the rapidity of its fatal progress, which different cases exhibit. Death took place sometimes in sixteen hours, and at other times, not for thirty-six days after the occurrence of the first declaratory symptoms.

This difference could not be satisfactorily accounted for, either by the relative strength of the patients, by the treatment adopted, by the size of the ruptured orifice, or by the quantity of fluid effused at the time of the accident into the pleural cavity.

"We insist," M. Louis very justly remarks, "on these details, because it is important that the physician should be aware, that in certain complications, mortal in their nature, the fatal termination may take place some hours or some weeks after their invasion, without his being able to explain on what these differences depend." 301.

Before closing these general remarks on this subject, we ought to notice the rapidity with which the effusion of turbid or sanguineous fluid into the pleural cavity may take place, after perforation of the lung. It was considerable in one case, where death occurred in twenty-four hours, and where the sound on percussion during the first twelve hours was clear; and in another case, where the effusion was serous, the progress was equally rapid. These facts, however remarkable, are strictly in accordance with what is frequently observed in simple pleurisy, and more especially in the cure of hydrocele by injection, when a considerable effusion of purulent fluid is sometimes formed in the tunica vaginalis, in the course of a few hours.

We shall now present to our readers' attention, abridged reports of seven, out of eight of the cases of this fatal accident, which M. Louis has met with in his practice. They deserve to be studiously considered by every scientific physician, as affording the most accurate data for the recognition of the disease which have yet been published.

A man, aged 36, was admitted into the La Charit  Hospital, on the 16th September. For five months previous, he had suffered, according to his own report, from cough, daily rigors, epigastric pain, and diarrh a. Three days before his admission, he was attacked *suddenly*, after a fit of vomiting, with a severe pain in the left side, accompanied with dyspn a and great anxiety, but these symptoms abating somewhat, he was able to walk to the hospital. On the 19th, the symptoms were acute pain in the side, breathing frequent and thoracic, orthopn a, percussion unusually clear over the whole of the left side, where no respiratory murmur could be heard, or any metallic tinkling: intercostal spaces prominent and wide, cough rare and accompanied with but little expectoration, action of the heart scarcely audible. On the 5th of October, a confused murmur was perceptible in the upper fourth of the left lung, and opposite the inferior angle of the scapula; when the patient spoke a metallic tinkling could be heard. At this point and lower down, the sound on percussion was dull; anteriorly it was clearer than natural, but at this point there was no metallic tinkling audible; all pain had ceased. Until the 20th of the month, the metallic tinkling continued to be audible, not only at the original spot, but also over almost the whole of the left side posteriorly, under the axilla, and opposite the mamma. On the 20th it could not be heard anywhere. The patient remained constantly in the sitting posture, and on the following day he died.

Dissection. Nearly four pints of greenish-coloured pus were found in the left pleural cavity. Adhesions of the lung existed at several points. On the posterior surface of the lung, opposite the angle of the third rib, there was discovered "a rounded opening, four lines in diameter, the termination of a canal of the same dimensions, which, after an inch and a half, was continuous with one of the large bronchi. This canal was lined by a membrane, which reposed either on tuberculous granulations or healthy lung, and evidently resulted from a larger cavity, successively narrowed by the compression of the air and pus. There were some small incompletely excavated cavities in the summit of the same lung, with numerous grey semi-transparent granulations. The right lung presented superiorly a depression corresponding to a semi-cartilaginous mass, enveloped by a black and dry substance with some softened tubercles."

Tuberculous granulations and ulcerations were found in the lower fourth of the small intestines.

Case 2. A woman, aged 45, had laboured under the symptoms of phthisis for four months preceding her admission into the hospital. Auscultation detected the presence of an excavation in the upper lobe of the left lung; the pectoriloquy, cavernous respiration, and dulness on percussion were well marked. One morning, when free from suffering, she was attacked with pain near the inferior angle of the scapula, which was at first moderate, then *suddenly* very severe, accompanied with great anxiety and orthopnoea. The patient said she was suffocating; no posture was easy; the pain in the back was acute, and the slightest percussion on the chest insupportable. It is stated in the report that no metallic tinkling was to be heard; but the state of the patient must have prevented a satisfactory examination of the chest. She died two days afterwards.

Dissection. On opening the right side of the thorax, an inodorous gas escaped, and about four ounces of turbid fluid was found. The right lung was compressed to one-third its natural dimensions.

"Situating immediately below an adhesion posteriorly, there was a rounded opening, three lines in diameter, communicating with a small excavation, lined by a very thin false membrane, in contact with sound lung. This small cavity neither communicated with the bronchi, nor with a very large excavation just above it, which was invested by a double false membrane, one layer of which was soft, the other semi-cartilaginous. In the three lower fourths of this lung there were only some grey semi-transparent granulation. The left lung adhered to the costal pleura in its upper half, presenting at its summit a large excavation communicating with the bronchi, and also numerous small cavities; in the two upper thirds there were numerous grey granulations, surrounded by a yellowish, moist, semi-transparent substance, homogeneous, and entirely deprived of air; the remainder of the organ was red and hepatized." 283.

Case 3. The patient was 32 years of age, and exhibited all the symptoms of confirmed phthisis. Cavernous respiration, and doubtful pectoriloquy, might be heard between the shoulders and under both clavicles, and the patient complained of a sense of great heat at these parts.

"She was attacked by a *violent and sudden pain* along the vertebral column, accompanied with dyspnoea and anxiety. The next morning the patient was in the sitting posture, and spoke only of her pain and difficulty of breathing, expressing her surprise at the suddenness of the attack; the countenance was altered, and percussion clearer to the left, posteriorly and laterally, than on the right side. Over the same extent, instead of the respiratory murmur there was only a mucous ronchus, which appeared to traverse an empty space, before arriving at the ear; there was no metallic tinkling; and on the patient's lying down and rapidly rising, no peculiar sound was heard; the breathing was very frequent, with great agitation; she expired at 10 o'clock the same evening, after intense suffering." 284.

Dissection. "Only a small quantity of gas escaped from the left side, which contained about three pints of sanguinolent fluid, without any fragments of albumen. A soft membrane, of a deep red colour, and one-third of a line thick, everywhere invested the lung and thoracic parietes. The summit of the lung for two inches and a half was intimately adherent to the neighbouring parts; and almost immediately beneath this adhesion posteriorly, there was a rounded

opening, about the size of a pea, communicating with a vast excavation, containing a very small quantity of a greyish fluid, similar to what was in contact with the diaphragm. The cavity communicated with the bronchi. The upper five-sixths of the lung were transformed into an indurated, greyish, semi-transparent substance, interspersed with numerous tubercles and small excavations; these communicated with each other, and in some points were only separated by a very thin layer, from the thoracic cavity; the lower sixth of the lung was crepitating; the bronchi were of a pale pink colour. There were some excavations in the summit of right lung, and at its base some crude tubercles; heart one-third less than its usual volume; aorta everywhere of a bright red." 285.

In the fourth case, the supervention of the *sudden* attack of pain, accompanied with great dyspnœa, and inability to lie down, and the unusually clear resonance of the chest over a large extent, where previously it had been indistinct, indicated the nature of the accident which had taken place, and that air had escaped into the cavity of the pleura. For the first four or five days, no metallic tinkling could be heard. It was then heard two inches below the clavicle, when the patient spoke. Subsequently, this peculiar auscultatory sound was perceptible over the lower three-fourths of the chest, which gave out a very clear sound on percussion. The patient died on the 18th day after the first occurrence of the symptoms.

Dissection. A quantity of gas escaped on opening the left side of the thorax, and a turbid greenish fluid was found in the cavity of the pleura. As in the former cases, the rupture was situated posteriorly, about two inches below the summit of the lung. It communicated with a large anfractuons vomica, which was pierced by the orifices of several bronchi. Both lungs presented numerous points of tubercular disease.

In the fifth case, the patient died on the second day after the *sudden* seizure, which indicated that rupture of the lung had probably taken place. On percussion, the left side anteriorly, afforded a much more resonant sound than the right. In the same region, no respiratory murmur nor metallic tinkling could be heard.

"The upper lobe was enveloped by another false membrane, half a line thick, and semi-cartilaginous; and at its lower portion there was a rounded yellow patch, a line in diameter, corresponding to a softened tubercle, which had been partially discharged into the pleural cavity. The opening was in part closed by a small quantity of tuberculous matter, and the cavity lined by a thin, soft, light-coloured false membrane; there was no communication with the bronchi." 291.

In the sixth case, the patient died the same day that the accident took place. On dissection, an opening of two lines in diameter was found at the upper part of the left inferior lobe. It led directly to an excavation, which was lined by the remains of tuberculous matter, but without any false membrane, and which communicated with the bronchi.

In the seventh case, the patient survived the accident from the 26th to the 31st of December. The dyspnœa became *suddenly* very intense, amounting to orthopnœa; but there was no pain experienced, either at the time of the accident or after it, as had been the case in all the preceding six cases. Percussion on the left side was infinitely clearer than on the right; the respiration was confused, and, as it were, distant; and, after every respiratory movement, there was heard a sound similar to that produced by blowing into an empty bottle.

Dissection. In the left pleural sac, there was found a turbid reddish fluid, similar, except in density, to what is observed in tubercular excavations. The upper three-fifths of the left lung were adherent to the side; and, just below the line of adhesion, there was an opening, five lines in diameter, which was traced to communicate with a tuberculous cavity, and this cavity extended upwards into the interlobular fissure. Other cavities and depositions pervaded the substance of this, and of the right lung.

The preceding seven cases, with the addition of one more, are all the examples of the perforation of the lung, in connexion with tuberculous softening, which have occurred in M. Louis's experience. In five of these cases, the perforation was found at the same point, viz. opposite to the angle of the third or fourth ribs; and at this point the sudden pain had been felt. In seven of the cases, the lesion had taken place on the left side. This corresponds with an assertion formerly made by our author, that tubercular depositions are more frequent, and generally further advanced in development, in the left than in the right lung. On no occasion was there more than one perforation found. Often, indeed, there were observed vomicæ, which had reached the pulmonary pleura, and which would, in all probability, have burst into the pleural cavity, had the two surfaces of this membrane not been coherent at these points. This appearance is usually most evident towards the summit of the upper lobes, where the sides of the excavations are often solely formed by the false semicartilaginous membrane.

The tuberculous matter is sometimes found in immediate contact with the ribs, and occasionally it even traverses the intercostal muscles. In these examples, had there been no adhesions, it would have escaped into the pleural cavity, and the train of symptoms, which we have seen to characterize perforation of the lung, would have ensued. Here we must close our remarks on this very curious subject—a subject which hitherto has not attracted much attention. The account which Louis has given of the symptoms during life, and of the post-mortem appearances which accompany perforation of the lung, at least that form of it which is co-existent with, and dependent upon, tubercular lesions, is by far the most complete which has hitherto been published.

OF THE MORE MARKED VARIETIES OF PHTHISIS.

Whoever has been much in the habit of attending to post-mortem examinations must be well aware, that a tuberculous state of one or of both lungs is not unfrequently met with in the bodies of patients, who had never, during life, exhibited any symptoms of pulmonary disease.* The existence of tubercles is, therefore, not necessarily associated with any very obvious disturbance of the general health. It is to this state that the term "latent phthisis" has been affixed by MM. Laennec and Louis; the germ of a fatal disease being not only present, but sometimes even considerably developed,

* Dr. Clark observes:—"Several of our celebrated pugilists have died tuberculous; and very lately one (Byrne, we believe) died of phthisis, a short time after an obstinately-contested fight, which proved fatal to his antagonist."

while its rational and more obvious signs or evidences are obscure, or perhaps entirely absent. If the question be put to a physician—what are the symptoms which would lead him to pronounce the existence of pulmonary consumption, he would very properly allude to the cough, expectoration of muco-purulent sputa, distress in the breathing, emaciation, hectic fever, and night sweats; and no one will deny that, if these symptoms be present, they would afford sufficient indication of the disease in question. Their absence, however, does not warrant the conclusion, that the lungs are exempt from serious tubercular injury. These organs may be the seat, not only of extensive tuberculous deposits, but even of numerous and large ulcerated cavities; and yet some of what are usually considered as the pathognomonic and necessary symptoms may be almost entirely absent. The cough, which, for the most part, is one of the earliest signs of pulmonary irritation, may be so unfrequent and so little troublesome, that the patient will deny that he ever coughs at all; and even his attendants may scarcely have noticed it. It may continue in this trifling degree for weeks, months, or even years, without any expectoration, and during all this time the lesion may be advancing slowly and certainly, to its fatal termination. Every practical physician, who has seen many cases of phthisis, and who is in the habit, and has the skill, to examine with accuracy the state of the respiratory organs, by means of auscultation and percussion, must have met with instances, rare indeed, but still occasional, in which he has detected, even on his first visit, the existence of incurable disease of the lungs, when neither the patient nor his friends had the slightest apprehension on the subject.

We cannot be much surprised at this security, when we are aware that the disease may have arrived at its confirmed stage, without the manifestation of the more obvious symptoms, viz. the cough and expectoration. Portal long ago observed, "it is not sufficiently known that the disease can exist without the slightest cough; the lungs of consumptive patients have even been destroyed by suppuration, without their having experienced the least degree of cough." Now, although it is of very rare occurrence that the cough is absent during the entire period of the disease, we shall find, from the reports of some of the cases related by M. Louis, that it may be so trifling as to have escaped notice until within a fortnight of the patient's decease.

These few remarks, it will be understood, are intended merely as precautionary hints to the physician. They apply only to the exceptional cases of the disease; but the knowledge that such cases do occur, and that so prominent a symptom as the cough may be almost, or altogether absent throughout, ought to be impressed on the mind of every medical practitioner. What we have said of the cough is equally, and perhaps still more applicable to the expectoration. It does not belong to our present intention, to examine the various changes and differences in the characters of the sputa observed in the progress of phthisis. The transitions from the transparent, ropy, saliva-like mucus, to the admixture of the partially opaque, ash-coloured, rounded massules with this mucus, and, from this state, to the yellowish puriform state, are well known; and although, in the present days of improved diagnosis, physicians are not so busily anxious to discriminate between pus and mucus as they were wont to be in the days of our forefathers, the varying qualities of the sputa well deserve to be minutely studied. Chomel and Louis states that, in several hundred cases of pulmonary disease which they

have accurately watched and reported, they have met with only two instances where the expectorated matter was streaked with more or less numerous yellow lines, and mixed, at first, with opaque whitish fragments, and afterwards with the rounded, globular, distinct masses, sometimes floating, and sometimes sinking in water, and yet in which the lungs were found, on dissection, free from tubercular disease. The affirmative value, therefore, of these appearances cannot be disputed; but let it be remembered, that extensive and most serious disorganization of the lungs may exist, while not only these appearances may be indistinctly traced in the sputa, but the very presence of any sputa whatsoever may have been entirely overlooked. That the sputa may be awaiting, while the tubercles are still crude, we may, perhaps, not be surprised to hear; but that large and suppurating excavations may exist in one or both lungs, without any, or only very trifling expectoration having been present in any period of the disease, is a fact which may stagger the belief of the inexperienced physician. Portal has alluded to this anomaly—"Quelquefois ce crachement purulent n'a pas lieu, quoique les poumons soient pleins de foyers de suppuration;" and Dr. Clark alludes to "one decided case, in which the absence of expectoration continued to the last—the lungs, on one side, were found converted into a mass of tubercular disease, containing one largish, and numerous smaller vomicæ; and the upper part of the upper lung was similarly, but not so extensively affected. Several of Louis' cases illustrate the same fact.

Dyspnœ, variable indeed extremely in the frequency of its recurrence and in its intensity, is perhaps more uniformly present in phthisis than either the cough or the expectoration.* It is usually hurried on slight exertion—it becomes oppressed and panting, and very often shooting pains are felt, at the same time, through the chest or between the shoulders.

If this state of the breathing occur in a weak and delicate constitution, having any tendency to phthisical disease—if the patient be, at the same time, liable to flushes of feverish irritation after meals—if the cheeks, palms of the hands, or soles of the feet are apt to become hot, while the rest of the body is cool, or even chilly—if he loses flesh while he continues to enjoy his food, and takes it in the accustomed quantity, the suspicion of the medical attendant ought to be immediately aroused, and a full, patient, and most accurate examination of the local, as well as of the constitutional, symptoms be immediately instituted. The hereditary temperament and liabilities of the patient should be ascertained; particular enquiry should be made as to the presence of any morning cough and expectoration, and, if present, how long they have existed, and what causes appear to induce them: the breathing, the digestion, in short, the state of every function, ought to be rigidly scrutinized. The aids to be derived from percussion and auscultation are especially valuable, in the circumstances which we are now considering, and they ought on no account to be ever neglected. If the sound elicited by percussion, especially under the clavicles, be unusually dull, or if it is deci-

* We do not mean to say that this symptom is generally, at first, either very distressing to the patient, or very manifest to his attendants—more frequently it is not; but still the indications of a certain degree of annoyance or inconvenience in the breathing, may be always detected by the attentive physician.

dedly duller on one side than on the other, we have reason to suspect mischief lurking underneath; and if, upon applying the ear over the dull region, the respiratory murmur is less soft, easy, and slumbering than natural, or if it be altogether suspended, while it is louder, coarser, and more bronchial, and, perhaps accompanied with a cripitating rhonchus in the neighbourhood of the mute region, and if the voice be, at the same time, more resonant there, our suspicions must be greatly confirmed. Whenever there exists a marked inequality in the sound elicited on percussion, and in the respiratory murmur, in the corresponding parts of the two sides of the chest, especially if these parts be the infra-clavicular, we have strong reason to apprehend tubercular disease of the lungs, unless such inequality can be otherwise satisfactorily accounted for. The combined value of the rational and physical signs is admirably described, in the following extract from Louis.

"When we therefore meet in the same individual, the *dry cough* which has existed a variable space of time, and in many instances come on without apparent cause, accompanied with *clear mucilaginous expectoration*, *pains* in the sides of chest or in the back, *hemoptysis* from the commencement or during the progress of the cough, *dulness of sound under one or both clavicles*, diminution or any other alteration of the respiratory murmur in the same point, while the remainder of the lungs is healthy, *we may be certain of the presence of unsoftened tubercles*. The dyspnœa, the loss of appetite, the emaciation, the sensibility to cold, &c. which are present in this first period, *assist* our diagnosis, but could not, independently of the preceding symptoms, confirm it." 150.

Before adducing some cases, in illustration of the latent form of phthisis, we are tempted to give circulation to the following valuable remarks on a new auscultatory sign, contained in a note appended by Dr. Cowan.

"It may be here useful to mention another result of auscultation, on which the attention of medical men has only been lately fixed, and which was first signalled by Dr. Jackson, of Boston, in the wards of M. Louis, who has twice amply confirmed its value as an additional aid in diagnosis. We refer to the study of the *expiration*. In health this is scarcely and sometimes not at all sensible, and never seems to occupy the seat of inspiration, and is evidently at a distance from the surface, in the larger bronchi, and very feeble. But when the density of the lung is increased, the expiration becomes gradually more and more distinct and superficial, till it resembles a *second inspiration*, and frequently is alone heard; without accurate comparative examination, it might easily, and no doubt often has been mistaken, for the *inspiratory* murmur. What renders this sign peculiarly valuable is, that the change in the *expiration* precedes that of the *inspiration*, and consequently the modification is principally applicable to the early periods of the disease, where correct diagnosis is so important. I have frequently seen M. Louis, from this symptom alone, decide on the existence of induration of the lung, when it could neither be detected by percussion or modified inspiration." 150.

CASES OF LATENT PHTHISIS.

Case 1. A man, aged 44, had been ailing for nine months before his admission into the hospital, on the 24th March. His chief complaints had been loss of appetite, thirst, frequent rigors, followed by heat and perspiration, weakness, and occasional pains between the shoulders. He had become much emaciated. There had been no cough, until within the six weeks previous to his admission. During the last three years, he had suffered se-

veral attacks of hæmoptysis. When received into the hospital, the sleep was found to be much interrupted by the cough; the sputa were yellow, greenish, but in separate masses, surrounded by a copious limpid fluid; cavernous respiration, with distinct pectoriloquy, was sensible between the shoulders and on the right side. He died on the 2d of April. The summits of both lungs exhibited vast rugged excavations, which, from their walls being firm, resisting, and lined with a dense membrane, must have existed for several months at least; and numerous tubercles and granulations were dispersed through almost every part of both organs.

Remarks. The history of this case proves undoubtedly that extensive and most serious degeneration of both lungs may exist for a length of time, without having induced cough, or any strongly marked pectoral symptoms. The febrile malaise, and the decay of the general health and strength, which had so long preceded the occurrence of the cough, are no doubt attributable to the morbid changes which were going on all the time, in the lungs; and therefore these symptoms, alone, even when unaccompanied by any very obvious or distinct distress of respiration, should lead the physician at once to suspect the integrity of the lungs, in the case of a patient who had at any period of his life suffered an attack of hæmoptysis.

“Supposing for a moment that we had seen this patient soon after the commencement of the fever, we ought then, by means of the previous history, to have suspected the existence of tubercles in the lungs, and perhaps at this period, auscultation would have removed every doubt. We ought therefore *never* to neglect this method of investigation, whenever febrile symptoms are present without any evident cause, more especially if these have been preceded by one or more hæmoptyses.” 241.

Case 2. A young woman, when admitted into La Charité, stated that she had been subject to shortness of breath from her infancy, but that her present illness might be dated from about the two last years. During the first seven months, she had daily paroxysms of fever, and she lost her flesh and strength very rapidly. These feverish attacks gradually ceased, without any treatment having been used, and she then recovered, at least partially, her flesh and vigour. The usual dyspnœa however, was considerably increased, and a cough, *attended with expectoration, had commenced three months before her entrance into the hospital*; previously she had been quite free from it. The symptoms, rational, as well as auscultatory, announced to M. Louis, the existence of a large cavity in the summit of the left lung. From the time after admission, until her death, a period of four weeks, the state of the cough is thus alluded to, here and there, in the case book: “Cough principally violent in the morning; expectoration green, scanty and semi-opaque:” “cough little:” “cough occasionally violent:” “expectoration had ceased.”

Dissection. A vast excavation in the upper left lobe; several small ones in the right; both lungs studded with tuberculous deposits.

Remarks. In this instance, tubercles had existed for a length of time, and even large excavations had been formed, before the cough had commenced. The febrile attacks experienced by the patient at the beginning of her protracted illness, are in our opinion to be attributed to the then incipient lesion of the lungs. Some may consider the disease to have been a simple ague;

but the concomitant circumstances of the case are opposed to this idea. We have witnessed several cases in practice, where the early hectic or ephemeral fever which sometimes attends the primary deposition of tubercles, has been mistaken for a genuine intermittent, and has been treated accordingly, with most pernicious consequences. It cannot be too urgently recommended to the physician, that he should always examine most minutely and attentively the state of the respiratory organs, whenever the symptoms of ague shew themselves under what may be deemed a suspicious form, as for example, when the state of the patient's health has been for some time previously decaying, or when he has not been more than usual exposed to the agency of those causes which commonly induce agues.

Case 3. A woman, 31 years of age, delicate, and subject to shortness of breath from her infancy, complained of having been liable to frequent indisposition for several successive years. For the last five years she expectorated a little every morning, and during the first eighteen months of this period she had a constant cough. This however was never very inconvenient, and it ceased spontaneously, after a residence of some months at the sea coast. It was always excited by foggy weather, and by any strong scents. During the last three years, the usual dyspnœa had rather increased. She had suffered from stomach and liver complaints, and had been treated without advantage, by long courses of calomel and purgatives. The catamenia had been generally very irregular, and sometimes absent altogether for several months. When admitted into the hospital, on the 2nd of January, the report states:—

“No dyspnœa when quiet, but it is brought on by the least exertion; no cough or expectoration; percussion everywhere clear; respiratory murmur natural, except under the right shoulder-blade, where it was stronger than in the corresponding point on the left side.” 247.

At the end of February, there was slight cough, though the patient assured us that she did not cough at all; the breathing was quickened by the slightest movement, but from the almost entire absence of cough, we attributed this to the general weakness. The cough and expectoration were trifling, until within the last two or three weeks of her life. She remained nine months in the hospital, where she died on the 28th of September. On dissection, a large tuberculous excavation was found in the right upper lobe of the right lung, numerous smaller ones were scattered through the rest of this, as well as through the corresponding lobe on the left side.

Remarks. “During the nine months this patient was in the hospital, with the exception of the last fifteen days, it may almost be said, that *she had no cough*; and surely no one can doubt that the excavations in the lungs had existed for a long time anterior to this period.” The development of the tubercular disease must have been extremely chronic in this case; for an attentive consideration of its history induced M. Louis to refer its commencement to between two and three years before its fatal issue. Appended to the report of the case is the following observation, which is interesting, as expressive of M. Louis' opinion, as to the curability of pulmonary consumption.

"The structure of the excavations also merit our attention. The largest was invested by a false membrane, lying upon almost healthy pulmonary tissue; this fact is rare, and it is only in analogous instances, *when the number of tubercles is small, that we can conceive the cure of phthisis to take place, by the cicatrization of the excavation.*" 250.

In the fourth case, which occurred in a young female, 21 years of age, the absence of cough, until the last two weeks of her life, and the scantiness of expectoration, were perhaps still more remarkable. Up to the period of death, the sputa are described as "scanty, sometimes frothy and mucous, at other times completely opaque and flocculent."

The most prominent symptoms were oppression of the breathing upon any exertion, and an obstinately severe epigastric distress. Indistinct pectoriloquy, and cavernous respiration were audible between the scapulæ, extending principally to the right side. The summits of both lungs, were found on dissection, to be occupied with numerous tubercles, some of which were softened and excavated; and others were still crude. The peculiar softening of the mucous membrane of the stomach, to which we have alluded in the early part of this review, was very strikingly developed in the present case. To this, we must ascribe the severe and protracted suffering in the region of the epigastrium, which this patient so long complained of.

The fifth case is very similar to the preceding one, in respect to the indistinctness of the pectoral, and the very marked prominence of the gastric symptoms, viz. the pain in the region of the stomach, the appetite variable, or uniformly deficient, the nausea, and frequent vomitings.

From the commencement of the disease in May, to and on the 26th of August, the day of her death, *there was no cough*, with the exception of the last ten days; it was then attributed by the patient to her throwing off the bed-clothes during the night; it excited little attention, and on account of her weak state, auscultation was not practised. The most prominent symptoms were occasional difficulty of breathing, repeated febrile attacks, and severe stomach distress.

Dissection. The upper lobe of the right lung was sprinkled with innumerable miliary grey semi-transparent granulations, more or less opaque in their centre. In the corresponding lobe of the left side, there was a middle-sized tuberculous excavation, lined by a semi-cartilaginous membrane.

These five cases, with the addition of other three, have been adduced by M. Louis, as examples of what he calls "latent phthisis;" a form of the disease peculiarly distressing, from the insidious progress of the evil, before its very existence may have been suspected.

The proportion of such cases, to those of what may be called the regular form of phthisis, is, according to the experience of M. Louis, about one to fifteen. If however the hæmoptysis, which so often precedes the cough and expectoration, is to be considered in the majority of instances the effect, rather than as a precursory symptom of tubercles, the relative frequency of latent phthisis must be stated much higher. With respect to the causes, or influences, which may tend to mask and conceal the existence of tuberculous disease, in that form of phthisis which we have been attempting to illustrate, it is certainly not easy to arrive at any very definite conclusions. The age of the patient might be supposed to have some influence; but our data are neither sufficiently numerous, nor accurate to warrant us in stating, at

what period of life it is most apt to occur. The ages of the eight patients whose cases are recorded by M. Louis, were 82, 44, 22, 31, 21, 24, 62, and 19.

It is reasonable to suppose, that the constitutional disposition or hereditary tendency to consumption, has been generally either not very strongly marked, or that it has been counteracted by peculiarly favourable circumstances, as of climate, occupation, &c.; and as far as we can determine from the reports of Louis' cases, the remark holds true of them. But, perhaps, of all causes, the most frequent and the most influential is the contemporaneous existence of some other morbid process, or it may be of pregnancy (for this condition seems to have the same effect,) in the system. The observations of Dr. Clark on this subject are excellent, and cannot be curtailed without disadvantage.

"Tuberculous disease is rendered latent, or is at least masked by a peculiar condition of the system in some cases; and in others by the presence of other diseases. Pregnancy appears to retard if not to suspend the progress of phthisis, and it is frequently observed that the disease advances with great rapidity immediately after parturition. The catamenia generally cease when the disease has made some progress; although they continue in a few rare cases until death. An attack of mania in a phthisical patient has been followed by the suspension of the pulmonary disease; which, however, rarely fails to carry off the patient ultimately, whether the attack of mania has ceased or not. The complication of dyspepsia with tuberculous disease is not an infrequent cause of the latter being overlooked, the dyspeptic symptoms being more evident than the phthisical. The aspect of the patient in such cases is pale and unhealthy; he gets thinner and weaker; the food which he takes neither affords him nourishment nor strength; and yet he has no evident ailment but what is referrible to the deranged state of the digestive organs. In such cases there may be no cough, no fever nor expectoration to excite our fears for the safety of the patient; while at the same time tubercles are present in the lungs. We have seen a patient of this kind, when asked any question respecting the state of his lungs, strike his chest, and confidently affirm that all was right there; although his lungs were tuberculous to a considerable extent at the time. This is the form of the disease which has been termed 'dyspeptic phthisis.'

Diarrhœa is another disease which sometimes disguises phthisis, and its effects in suspending all the usual symptoms of pulmonary affection are often remarkable. We have known more than one example of extensive tuberculous disease of the lungs being detected on dissection, when the cause of death has been looked for in the intestines. It is true that these were cases in which the early history of the disease was disregarded, but they serve at least to shew the power of diarrhœa in making extensive affections of the lungs." 19.

ACUTE FORM OF PHTHISIS.

The duration of tubercular phthisis varies from a few weeks to twenty years and upwards. Perhaps the average length of time, reckoning from the earliest softening of any of the tubercles to the period of death, may be stated to range from nine to eighteen months. In the very rapidly fatal cases, those to which, in this country, we apply the term "galloping consumption," the phases of the disease so quickly succeed each other, that the vital energies appear to be at once overpowered, and not even a favorable remission of the symptoms is at any time observed. From the first open es-

establishment and manifestation of the mischief, its progress is sure, speedy, and appalling; and the young practitioner is sometimes apt to suppose, that he may be treating a case rather of an acute bronchitis, or pneumonia, than one of genuine tubercular consumption. M. Andral has supported four examples of this rapid form of phthisis, which varied in duration, from twenty-one to thirty-five days; and, according to the table given by M. Louis, it appears that six of his cases proved fatal from the 24th to the 80th day. Dr. Clark has described the characters of acute phthisis with his usual ability.

“The acute form of phthisis admits of a useful division into two varieties, in one of which the short duration of the disease appears to depend chiefly on its violence, or the activity of the morbid process; and in the other, on the feeble powers of the constitution, which sink under the pulmonary disease long before it has reached the degree in which it usually proves fatal. This last variety is observed chiefly in delicate young persons, and more frequently according to our observation, in females than in males. The ordinary state of health of such persons is far below the common standard; they are possessed of the highest degree of the tuberculous constitution or temperament; they are weak, easily fatigued, and have generally a languid circulation, indicated by a feeble pulse and cold extremities, even in their best health, and before any suspicion exists that these general phenomena are connected with tuberculous cachexia.”

“There is a slight cough, with some shortness of breathing; and the pulse is frequent, or easily rendered so by the slightest exertion. The patient is weak, but scarcely considers herself ill; there is no pain of chest, no hemoptysis, and perhaps no expectoration. Debility is usually considered the cause of these symptoms, and even when they are accompanied with morning perspirations and well-marked emaciation, the friends are scarcely alarmed. They tell us that she was always short-breathed and liable to cold; and the cough seems of so little consequence, that they think the lungs must be sound. In this way the patient continues to become rapidly worse; the cough is more troublesome, and is by degrees accompanied with some expectoration, in which a tinge of blood, occasionally appears. The breathing is now also observed to be quick, even when the patient is at rest; the pulse is rapid, and there are frequent and often very copious morning perspirations. The countenance of the patient alone, at this time is very often sufficient to indicate the danger: it is generally pale and of a leaden hue, the lips are often of a blueish colour, and the albuginea of a peculiar dull pearly tint; the whole features are sunk and the countenance faded. Without any increased activity of the symptoms, such a patient may sink rapidly under an attack of diarrhœa, and a fainting fit unexpectedly terminate the scene.”

“The other variety of acute phthisis presents itself in more striking characters. All the symptoms of phthisis are present in an unusual degree of severity, and succeed each other with great rapidity. The cough increases daily, and the expectoration goes through its various changes in the course of a few weeks; the hectic fever is violent, the morning perspirations are copious, and diarrhœa usually contributes its share in the destruction of the patient.” 12.

The *acute* form of pulmonary consumption is generally observed in young persons, and especially after the cessation of acute febrile diseases, as fever, scarlatina, measles, &c. or of an attack of hæmoptysis. Most of the cases which have occurred in our own practice have been the direct consequence, we might even say the continuation, of a sudden and violent attack of spitting of blood. The patients never recovered, and sometimes never left their beds since the invasion. It is not improbable, that the very remedial means which may have been deemed necessary to arrest the frightful hæmorrhage have, by reducing the strength of the system, and, by causing

a general re-action (so often the effect of large and repeated bleedings,) tended to accelerate the changes of the tubercular deposits. Catarrh and pneumonia may have the same effect. As a matter of course, the tubercular disease of the lungs is, we must suppose, already established; and it only requires the application of some cause inducing pulmonary congestion or inflammation, while the system is at the same moment in a state of great debility, either from protracted indisposition, or from temporary excessive evacuations, to give, as it were, the momentum to the process of disorganization. The doctrine involved in the following paragraph of Dr. Clark's treatise appears to us of very questionable accuracy.—“The rapid progress of phthisis often occurs in persons of a constitution so highly tuberculous, that it only requires the application of some exciting cause to *determine the deposition* of tuberculous matter in the lungs.” We think it much more probable that there has been a tuberculous disease of the lungs latent for a considerable time previous to the invasion of the acute symptoms, at least in those cases which prove fatal in the course of a few weeks. It is our duty, however, to state, that the opinion of Dr. Clark is countenanced by, and, indeed, derived from, M. Louis, who, in the observations affixed to the second case of acute phthisis, remarks—

“It cannot be supposed that when the fever and dyspnœa commenced, that tubercles already existed in the lungs; for before this the patient was *in perfect health*, and it is difficult to imagine such numerous granulations to be present without impeding pulmonary functions; so that every thing indicates that tubercular deposition was here extremely rapid.” 266.

The following examples, abridged from Louis' reports, will form a useful commentary on the preceding remarks.

Case 1. A girl, aged 18, of a moderately-strong constitution, was admitted into La Charité on the 29th April. She had been little subject to colds, usually in good health, and dated her present illness as of only fifteen days' standing. It commenced by rigors, followed by flashes of heat and by perspiration. These attacks became more frequent and of longer duration; they induced complete loss of appetite, general malaise, and very considerable debility. On the 10th day from the commencement, there was slight cough and expectoration observed for the first time. These symptoms were, in the course of a few days, much aggravated, the cough becoming very frequent and troublesome, the respiration thoracic and much hurried, and the sputa semi-opaque and greenish. Pains were felt under the sternum and left clavicle. The feverish irritation of the system, denoted by rapid pulse, intense heat, red tongue, great thirst, anorexia, and headache, continued. From this period till the 16th day of May, the progress of the disease was rapid and continuous, the expectoration becoming more decidedly phthisical, the breathing more distressed and quickened, varying from 45 to 60 times in the minute, and the auscultatory signs more distinct and expressive. The report of the 16th states, that the pulse has become gradually more and more frequent; heat much elevated and dry: thirst very urgent, the patient drinking five or six pints of fluid in the 24 hours; constant night-sweats, &c. Death took place on the 19th.

Dissection. “The left lung offered some adhesions posteriorly; the upper lobe contained numerous grey semi-transparent granulations, surrounded by slightly engorged pulmonary tissue; the engorgement was more considerable in

the base of the lower lobe, which contained a few granulations; the right lung, universally adherent, was transformed at its base into a mass of tuberculous matter of a pale rose tint, to the extent of two inches in height and two in breadth, occupying nearly the whole circumference of this part of the lung; it was perforated by a kind of anfractuons canal, enclosing a small quantity of a thick dark coloured fluid. Elsewhere the lung presented numerous semi-transparent granulations, and small softened masses of tuberculous matter: its tissue was slightly engorged." 262.

The abdominal viscera were nearly quite sound.

Remarks.—"In this observation the interval between health and disease was short; the cessation of one, and the commencement of the other, were well marked; the duration of the disease was thirty-five days, that of the cough twenty-five. The intense nature of the symptoms is as remarkable as the rapid progress of the affection. At first, intense febrile movement, associated after ten days with cough, expectoration, and dyspnœa; these rapidly increased; from the sixth day of the cough, the breathing was 47, and still more accelerated on the succeeding days; the temperature was much elevated, and pulse frequent; all pointed out an affection of the lungs." 262.

M. Louis adds; "it is remarkable, that notwithstanding the extreme rapidity of tuberculous developement in the preceding case, there were scarcely any traces of inflammation in the surrounding textures, not even in the right lung, which, we supposed from the symptoms, during life, would have been chiefly affected." From this he reasons, that tubercular changes are not necessarily of an inflammatory character, as Broussais has maintained.

Case 2. A young man, 19 years of age, was admitted into the hospital on the 4th of May. He stated that he had been ill about twenty days; that his illness commenced with cough, clear expectoration, and general feverishness; that these symptoms gradually increased in severity, and became accompanied with flying pains through the chest, and with headache.

The day after his admission, it is reported:—

"Face hot, red, animated; eyes brilliant, lively; headache, with dorsal decubitus; oppression moderate, little cough, expectoration like frothy saliva. On the left side there was pain under the edge of the false ribs, and percussion was dull in the lower half the same side of chest posteriorly, and anteriorly under the clavicle; cavernous ronchus very distinct in the latter region, and opposite the shoulder there was incomplete œgophonia." 267.

During the last eight days of his life, the dyspnœa was urgent and the breathing very rapid. The pulse was always accelerated, generally as high as 100, and sometimes even much quicker. The heat elevated, the thirst very urgent, the night perspirations copious, and these were followed by occasional rigors. The cavernous ronchus and respiratory noise became more and more distinct, especially under the left clavicle, but without pectoriloquy. Percussion was dull on the left side below the mamma, and over two inferior thirds of the chest. He died on the 4th of June.

Dissection.—"Left lung everywhere adherent, by means of dense resisting false membrane. At its summit there was a half emptied cavity of about the size of a nut, with numerous tubercles, and some isolated hepatized portions of lung; the remainder of the whole lung was almost entirely converted into tuberculous matter, disposed in masses of variable dimensions, between which there

was scarcely a tenth of the parenchyma permeable to the air. The right lung was free, with numerous tubercles at its summit, many of which were softened or half excavated; they were confined to this portion of the lung; the thin edges of the upper and middle lobe were hepatised." 268.

Remarks. If we date the commencement of the disease in the preceding case from the invasion of cough and fever, (and before this period there had been no functional derangement,) its total duration may be reckoned at fifty days. It is not easy to explain the presence of the ægophony heard in the early stage of the case.

In the third case, which proved fatal in between four and five weeks, the affection commenced without any evident cause, and directly after the patient had partaken of a moderate repast, with rigors, followed by heat and perspiration. After the first four-and-twenty hours, the breathing became oppressed, the dyspnœa continually increased, and there was occasional cough. The febrile attacks gradually became more frequent and severe; and the strength of the patient very rapidly decayed. The morbid appearances in the lungs are thus described.

"Their tissue was red, and granulated over the greater part of their extent, easily broken down, especially on the right side; firmer at the summit than the base, yielding when pressed, a thick dark coloured fluid, which was mingled with a little air inferiorly; there were numerous grey, semi-transparent granulations, diminishing from above downwards. They were opaque and yellowish in their centre, varying in size from hemp to that of millet seeds, the latter of which were without the central opaque spot." 265.

Thus we have detailed at length the post mortem appearances, discovered in three of the cases of acute, or rapidly fatal phthisis, in order that the reader may be enabled to recognize the differences in their character and extent, from those which are usually found after protracted chronic cases of the disease. It will be perceived that the middle and lower lobes of the lungs are comparatively more frequently affected in cases of the acute form; and that the whole of one lung is sometimes found almost completely infiltrated with tuberculous deposit, in various stages of developement, in one part consisting chiefly of the grey semi-transparent matter, in another of the genuine yellow tuberculous matter. When vomicæ are found, they are, as might have been predicted, small, irregular, incompletely excavated, with walls which are soft, yielding, and not lined with any distinct membranous coating, but merely with a thin layer of semi-fluid lymph.

On the contrary, when vomicæ have existed for a considerable length of time their parietes are almost constantly more or less hard and resisting, and are formed either of the yellow tuberculous matter, of the grey substance, or sometimes of melanotic matter. The membrane which lines an old excavation, is dense, greyish, almost semicartilaginous, and is generally covered by another membrane of very slight consistence, of a yellowish, or whitish colour, and usually distributed in patches. Sometimes there is no lining membrane at all; and then, the pulmonary texture, more or less considerably altered, is uncovered, forming the parietes of the cavity. The contents of an old vomica are very often of a greyish, or greenish tint, having a dirty and disagreeable appearance, thin, of moderate consistence, and sometimes tinged with blood, or even of a deep red colour. Their smell is occasionally extremely offensive and putrid, resembling that of animal substances, which have been macerating for some time. The con-

tents of a recent vomica have usually the character of common purulent matter. Moreover an old excavation is generally more uneven and rugged, than one that is more recent. It is frequently crossed in different directions by cord-like bands, or intersections, formed by the grey semi-transparent matter, which is interspersed with genuine tubercles, and in which blood-vessels, either obstructed or opened, are sometimes, although rarely, found. When the softening of the deposited tuberculous matter takes place rapidly, as in acute phthisis, a large extent of one or both lungs, and sometimes even the entire lung of one side, undergoes the morbid change simultaneously, becoming soft, and easily broken down throughout the whole of its substance. At different parts of such a disorganised mass, and more especially towards the summits of the lungs, one or more irregular cavities may be found, more or less filled with puriform matter, but not exhibiting the firm lining membrane, nor the intersecting bands, which are observed in vomicae of longer standing. Such are some of the most striking differences in the morbid appearances noticed after acute, from those observed after the regular or chronic form of the disease. It is unnecessary to allude to the marked differences in their symptoms during life. These are too obvious and characteristic to escape the attention of the least exact. Not so, however, is the line of demarcation between the acute form of phthisis, and another form recognized by Dr. Clark, and to which he has affixed the term *febrile*, "from the degree of fever with which it is usually ushered in and attended during its whole course." In order that our readers may, by comparing Dr. Clark's description, with the reports of the cases of acute phthisis, which we have already extracted from Louis, judge for themselves of the propriety of establishing another form of the disease, we shall give the description of it in Dr. C.'s own words.

"The attack of febrile phthisis is generally sudden, occurring in a state of apparent health, after exposure to cold, or even without any very evident cause. We say apparent health, because we believe that the disease never occurs in a healthy constitution. It attacks persons of a tuberculous diathesis; and the most marked cases which have come under our observation have occurred in persons having a strong hereditary disposition to phthisis,—in members of families, several of whom had already fallen victims to the disease in its usual form.

It commences with shivering, followed by heat of skin, quick pulse, and the other symptoms of fever, which often continue for several days with little or no indications of pulmonary disease. In some cases it puts on the characters of bilious fever, and in others of catarrhal fever, for both of which it is sometimes mistaken; indeed we believe it would have been such in a healthy constitution, but occurring in a person labouring under tuberculous cachexia, the rapid deposition of tuberculous matter in the lungs is the consequence of the disturbance created in the system by the febrile attack. Cough, however, soon appears, and the breathing is noticed to be particularly rapid, which is one of the most marked and constant symptoms of this form of phthisis. The cough, when it has once occurred, becomes speedily more frequent, and is soon accompanied with some expectoration, which is at first colourless, afterwards assuming a yellowish or greenish hue, and occasionally being streaked with blood; but it rarely puts on the character of the expectoration in the advanced stages of ordinary phthisis. Pain of one or both sides frequently occurs, and occasionally diarrhœa is present. The fever, in the mean while, continues without abatement, and is so much out of proportion to the other symptoms of pulmonary affection, that the true character of the disease is liable to be overlooked. In the course of from three to six or seven weeks the patient sinks." 17.

Now what is the short, but comprehensive description of acute phthisis, given by Louis.

"The number of our observations is too limited to justify any general description of acute phthisis, or to allow us accurately to delineate its diagnostic symptoms. We think however this form of the disease ought to be dreaded, in those cases where dyspnœa, cough, expectoration, fever, with sometimes pain of chest and very hurried respiration, come on suddenly and without evident cause." 273.

And if the reader will take the trouble to read attentively the three preceding cases of acute phthisis, he will find, we think, their symptomatology, and that of Dr. Clark's febrile phthisis to be very much alike. The "particularly rapid" breathing which is considered by Dr. Clark, as "one of the most marked and constant symptoms of febrile phthisis," was very conspicuous in the majority of the cases. It is particularly alluded to in the first report, in which the respiration is stated as "varying from 49 to even 60 times in the minute." The circumstance too of the expectorated matter not exhibiting all the characters it usually presents in regular phthisis, is well illustrated in the report of the third case, where "the dyspnœa and breathing were rapid the last eight days; the cough was sometimes violent, but usually moderate; and the expectoration became *partially greenish, but not striated*, towards the last." This case proved fatal in seven weeks from the commencement of the phthisical symptoms.

Dr. Clark then proceeds to notice the occasional difficulty of a correct diagnosis in this form of phthisis, which, he tells us, may be mistaken for acute bronchitis, or even for pneumonia; a mistake, which is the more excusable as the tuberculous disease in its progress is often complicated with one or other of these affections.

But is not the same difficulty, and this too proceeding from the same cause, experienced in some cases of the acute form of the disease? Dr. C. himself has in a previous part of his treatise very justly observed—

"The error into which this variety of acute phthisis is calculated to lead an inexperienced or careless practitioner, is that of considering and treating it as a purely inflammatory disease, and using much more active measures, and giving a more favourable prognosis, than the real nature of the case justifies. An inquiry into the previous health of the patient and careful observation of the symptoms will soon unveil the real nature of such cases. It is true that inflammation in some part of the respiratory organs often exists, complicating the tuberculous disease; but it requires to be treated with much more delicacy than a simple inflammation, and a very different prognosis should be given." 13.

The pathology of febrile phthisis is stated by Dr. C. to be "somewhat peculiar." The morbid appearances generally observed, "consist of the grey granulations over a greater or less extent of the lungs in some cases; in others, large portions of the lungs appear to be converted into a mass of cheesy-like tuberculous matter, the pulmonary tissue being completely infiltrated with it. The tuberculous matter is less frequently confined to the summits of the lungs in this form of phthisis than in any other. Tuberculous cavities are also found in some cases, but they are generally of small size, only partially evacuated, and have no lining membrane, as occurs in cavities of long duration in the ordinary form of phthisis." Now, no better description could be given of the pathology of acute phthisis, at least of Dr. Clark's second variety of this form, than that here detailed, which we

have transferred from his to our own pages. Having said so much as to the general symptoms, and the pathological characters of *febrile* phthisis, it must be unnecessary to allude to the auscultatory signs which are said to assist in discriminating it from the other forms of the disease. They may be easily inferred from a knowledge of the state of lungs usually found on dissection. The dull sound elicited by percussion is heard over a large extent of one, or of both sides of the chest. The respiratory murmur is louder, coarser, and more bronchial than usual, and is frequently accompanied by a mucous or crepitating r le. Pectoriloquy, when present, is usually imperfect, and the metallic tinkling sound is seldom or perhaps never heard. This description is equally applicable to the acute, as to the febrile form of phthisis.

For the reasons now adduced, we are unwilling to admit the *febrile*, as a distinct form of the disease, and we think it probable that Dr. Clark, on a revision of the subject, will come to the same conclusion. Some physicians have maintained that most cases of acute and febrile phthisis are strictly and essentially of an inflammatory character. The experience of Louis, and the reasoning of Dr. Clark, prove that this explanation is highly improbable. An attack of pneumonia or of pleuritis may, and very often does, supervene during the course, and more especially towards the close of ordinary phthisis, and the latter disease will then assume all the fatal rapidity of a genuine acute case. The knowledge of this fact is very necessary to the practical physician, as the symptoms of the inflammatory attack are sometimes so faint and obscure, that they are apt to be overlooked. All accessions of high feverish irritation in a phthisical case ought therefore to be attentively watched; not indeed that every such attack indicates pulmonic inflammation, (for we have already seen that pyrexia will be induced by the mere rapid evolution of tubercles in the lungs,) but only because such an attack is by no means of improbable occurrence. Indeed, during the course of other chronic diseases, as well as of phthisis, a similar, but not so great a tendency to pulmonic and pleuritic inflammation is frequently observed. M. Louis states that, in 112 cases where death took place during the last stage of chronic diseases of various sorts, in twelve he found a portion of one, and sometimes of both lungs, red, granulated, and hepatized, and in other ten cases a high degree of congestion in these organs. The result of his observation is, that "tubercles and tubercular excavations are nearly without influence over the development of pneumonia in the last stage of phthisis." The same remark is applicable to pleuritis; a disease which is often developed in the last period of phthisis, and also of other chronic maladies; arising sometimes from evident causes, as the application of cold to the surface of the body, but most frequently without any appreciable cause. The converse of these propositions is also stoutly maintained by our author. His work is full of data adduced to prove that pneumonia and pleuritis exert but little influence, except so far as they weaken and injure the general health, on the development of phthisis. Among other arguments, he alludes to the well-established facts, that pneumonia is most usually developed from the base to the summit of the lungs, while the reverse is the case with tubercular disease: the pneumonia seldom attack both sides of the chest, while phthisis almost invariably occupies both lungs; and that pneumonia is more frequent in men than in women, the reverse holding good with phthisis.

We shall close our remarks on this subject by the following passage from Dr. Clark, with whose opinion we entirely coincide.

"We believe that inflammation in a tuberculous constitution may give rise to the deposition of tuberculous matter in place of lymph, which is its usual product in healthy subjects, and this may be one of the sources of tuberculous disease: but it does not follow that it is the most constant or even most frequent cause of tuberculous deposits. A striking objection also occurs to this view of the case, in the fact that pneumonic inflammation is no infrequent occurrence during the progress of the disease, and that this is characterized during life by its proper symptoms, and after death by the usual morbid appearances: one part of the lungs presenting the usual results of pneumonia, while in others we find the tuberculous infiltration which has just been noticed." 18.

Bayle, Laennec, Andral, all agree in regarding pneumonia as a very secondary cause of phthisis. The contrary opinion, so obstinately held by Broussais, is contradicted by unprejudiced experience.

So much of our space has been occupied with the consideration of the *latent* and *acute* forms of pulmonary phthisis, that we can afford but little room for any remarks on that form, which, from its very slow progress and protracted duration, has been denominated lingering or *chronic* consumption. We have already stated, that the average duration of phthisis may be considered to be from nine months to a year and a half, or two years. But this period is occasionally prolonged to a continuance of many years. According to a table of 114 cases, the duration of each of which was determined as accurately as possible, it appears that, in 19, the disease lasted from two to twenty years, giving thus the proportion of rather less than a fifth of the whole number. These 19 cases are arranged as follows:—

Duration of the Disease.	Number of Deaths.
2½	2
3	4
4	6
5	2
10	1
12	2
14	1
20	1

Chronic phthisis occurs more frequently in patients of from twenty-five to forty years and upwards, than at an earlier period of life. The tubercular predisposition, we may suppose, is either never very strong, perhaps not at all hereditary, and, therefore, accidentally induced or acquired, or it has been kept in check, and counteracted, by the favourable circumstances in which the patient has been placed. Thus a change of climate, when as yet no signs of the disease have ever shewn themselves, is not unfrequently observed to preserve one member of a family, all the rest of whom may have been swept away. We have often had occasion to remark this in the case of sons, who had been sent out in their youth to the East Indies, and had remained there for a number of years.

The approaches of chronic phthisis are generally most insidious and obscure. A slight and occasional cough, which attracts little attention, and which ceases altogether on the setting in of fine weather—a general weakness, and incapacity for long continued exertion—a disposition to stomach-

complaints: these symptoms, from being trifling in degree, and, perhaps, only of short duration at a time, are perhaps altogether overlooked, or attributed to a mere common catarrh, or to an occasional dyspepsia. A visit to the country in Summer may restore the patient to an apparent perfect health. But, in the succeeding Winter, the cough is found to return, and to be easily aggravated by all changes in the weather; perhaps the breathing becomes hurried and oppressed on any exertion, and then the skin is apt to be bedewed with perspiration; the patient complains of fits of chilliness coming over him, without any evident cause; the hands, and more especially the feet, are with difficulty kept comfortably warm; the cough is usually more troublesome in the morning when he first awakes, and it induces scanty expectoration of frothy, saliva-like mucus, colourless and uniform at first, but afterwards more stringy, having intermixed with it specks of opaque matter, which partly sink and partly float in water, in the form of striæ. A slight attack of hæmoptysis is not unfrequent at this period of the disease.

Such may be the state of the patient during the Winter and Spring months. As the warm and genial weather commences, all the troublesome symptoms may gradually cease—the cough may leave him—his flesh and strength return, and he may appear to be capable of strong and frequent exertion. Generally, however, the cough is apt to return every now and then, as after sudden changes of the weather, or any severe exertion of the lungs, as in speaking, singing, &c.; the appetite may be very good, but the patient remains thinner than might have been expected, and he finds that he is obliged to cease bodily, or even merely mental labour sooner than his inclination would lead to do.

“This is a state of things (says Dr. Clark) which is not uncommon in persons living in easy circumstances, and who are not required to make much exertion, or expose themselves to the vicissitudes of the weather, or to other exciting causes. They are considered delicate; they find it necessary to take care of themselves, but the nature of their ailments frequently remains long unsuspected. The cough is little regarded, because it does not increase and gives very slight trouble, and even abates so much during the summer as to be scarcely remarked. The breathing is short, but the dyspnœa has come on so slowly that the patient is hardly aware that it is a new complaint, and often deceives himself in thinking that he was always short-breathed. There is often among consumptive persons a jealousy of being interrogated on any symptom which seems connected with pulmonary disease; and they not uncommonly conceal such symptoms from the physician, who must, if he desires to arrive at the truth, put his questions with great caution, and without appearing to attach any importance to them. Invalids of this description are rarely free from dyspepsia in a greater or less degree; they are liable to an increase of the catarrhal symptoms from slight exposure to cold, and are frequently subject to attacks of diarrhœa, and from which their recovery is often tedious and protracted.” 14.

Year after year may pass over, and the patient may, with care, enjoy moderately good health; should he, however, be seized with any inflammatory disease, especially of the respiratory organs, or with any smart febrile attack, the tuberculous disorder is apt to be immediately roused to activity, and the patient may rapidly sink under it, with all the symptoms of a well-marked consumption, which is then very generally attributed, both by himself and his attendants, to the invasion of what was merely a superadded and accidental occurrence. Unfortunately we are obliged to confess, that even the physician often allows himself to be deceived as to the true state of things.

There is the less excuse for this in the present day, when the diagnostic signs have been made so much more exact and expressive, than they were before the discovery of percussion and auscultation. We cannot too urgently call upon all our professional brethren, never to omit to examine the chests of their patients, in every case of thoracic complaint, whether it is attended with suspicious circumstances, or not. Such men as Andral, Louis and Chomel, not to mention a host of others, would not have been so unanimous in their praises of auscultation, had experience not taught them its paramount utility. The extent and degree of degeneration sometimes found in the lungs of those who have died of chronic phthisis, are truly astonishing. The entire lung on one side and more than a half of the other one, are not unfrequently mere masses of tuberculous deposit in its various stages of crudity, and softening, exhibiting in some parts one or two vast excavations, and in others, numerous smaller ones.

The last form of phthisis to which we shall allude derives its name and peculiarity of character, from the early period of life at which it occurs, and from the seat of the chief lesion discoverable on dissection. When tubercular disease attacks infants and young children, the deposition is found more frequently, in the substance of the bronchial glands, than of any other portion of the thoracic contents; and hence the term *bronchial* phthisis has been proposed to denominate this form. M. Lombard has given two tables in his ingenious Essay on Tubercles, with the view of exhibiting the relative frequency of the disease in the different organs and viscera of the body, at different periods of life.

In 100 adult phthisical patients, he found, (not to mention the lungs, which were as a matter of course diseased in all) tubercles in the intestines 26 times; in the mesenteric glands, 19 times; in the bronchial glands, 9 times; in the spleen, 6 times; in the brain, and its envelopes, 3 times; and in the kidneys and some other internal viscera only once; whereas in the same number of cases of bronchial phthisis, the proportional frequency is shewn by the following figures:—The lungs themselves, 73—intestines, 9—mesenteric glands, 31—bronchial glands, 87—spleen, 25—brain and its envelopes, 15—and kidneys, 11.

Our confidence in the accuracy of these tables is enhanced by their results coinciding with the investigations on the same subject, made by M. Papavoine, who has published an excellent memoir in the 2nd vol. of the *Journal de Progrès des Sciences Médicales*. The researches also of Louis, Andral and Alison, all tend to the same general conclusion, that the proportional frequency of tubercles, in different organs varies much in the infant and adult. In the former, they usually exist in a greater number of organs at once, and they are not so invariably present in the lungs.* Their more frequent occurrence in the brain and its meninges, in the spleen and kidneys, but above all, in the bronchial glands, are facts of curious interest to

* Louis, it appears, is not quite willing to admit that tubercles are so frequently, if indeed they are ever, found in the other viscera, and organs of the body, even in the case of infants, while the lungs are totally exempt from them. He says; "we have never observed tubercles in a single instance in any organ, without their existing in the lungs at the same time; so that their presence in these last viscera, seems a necessary condition for their development in other parts." Andral, Lombard, &c. differ from Louis, and assure us that they have occasionally discovered tubercles in various organs, when none were to be observed in

the practical physician, as well as to the pathologist. It is in the bronchial glands, that the tubercular phthisis of young children usually commences. The disease in some cases does not extend beyond them, and yet will prove fatal, without affecting the lungs, or any other organ.

The following case, derived from Dr. Alison's paper on Scrofula, in the Transactions of the Edinburgh Medical Society, is an instructive example.

"J. S. æt. five, a boy of ordinary stature, and pretty stout, but somewhat rickety, and with a small scrofulous sore on his leg, was attacked in the end of November 1815, with well-marked pneumonic symptoms. While these were recent, he was seen by different medical men, who had no doubt of their nature, and he was bled twice at the arm, and used the other usual remedies, with very imperfect success: the heat of skin, febrile oppression, and dyspnœa abated somewhat, but his breathing continued short, his cough very troublesome and dry; and he passed gradually into the state of perfect hectic, the rigors in the afternoons and morning sweats being unusually severe. He died, considerably emaciated, in the end of January 1816. On dissection, the lungs were found of the natural spongy texture throughout, and the disease appeared to have been confined to the bronchial glands, which were enormously enlarged, and all converted into the usual cheesy or tubercular matter. There was no other disease in thorax or abdomen." 16.

In general however, tuberculous disease does not remain long limited to the bronchial glands: the lungs first, and then the mesenteric glands are gradually involved in the morbid process, and the train of symptoms becomes consequently more and more complicated. The bronchial membrane, in the neighbourhood of the diseased glands, is usually but not always found in a state of inflammation, and no doubt for the same reason, that when the mesenteric glands are tuberculous, the adjoining portion of intestine is commonly more or less deeply inflamed.

The symptoms of bronchial phthisis are usually at first very obscure and unsatisfactory; and the disease may continue long, and may have advanced to a most serious extent, before its presence has been even suspected.

The child is afflicted with an obstinate catarrh, remittent in severity, but never entirely absent for a length of time: the cough is in many cases paroxysmal, recurring in fits, as in pertussis: it is rarely attended with expectoration, until the latter stages of the disease, and even then this last-mentioned symptom may appear to be entirely wanting, from the sputa being swallowed. The breathing is hurried and distressed upon every exertion. The child usually points to the upper part of the sternum, as the seat of its chief distress. Hæmoptysis is of very rare occurrence in infantile phthisis. The hectic fever is never so perfectly formed, nor the perspirations so profuse, as in phthisis in the adult subject; the emaciation however, and decay of the system may proceed with very fatal rapidity. When the symptoms now enumerated occur in a young child, and when, upon a minute examination, neither pulmonic nor mesentric disease can be distinctly inferred,

the lungs. In reference to the opinions of these authors, Dr. Cowan has very sensibly remarked: "We are disposed to think that the *latter fact* is not satisfactorily established, either for infants or adults, and that the value of M. Louis' observations on this point (which only present one exception in 350 examples,) is not yet impaired, for we must remember that M. M. Andral and Lombard, not considering the grey semi-transparent granulations to be a modification of tubercles, they no doubt have omitted to mention them in their calculation, and this may be the cause of the non-accordance of their results with those of M. Louis." 120.

we may justly suspect, that there is tuberculous disease of the bronchial glands. Our suspicions will be confirmed, if our patient be at all predisposed to a tuberculous diathesis from hereditary taint. The form of consumption, which we have been considering, is far more common than hitherto has been generally believed. Dr. Guersent assures us that, at the Hôpital des Enfants in Paris, five-sixths of those who die in that establishment, exhibit on dissection, traces of more or less extensive tuberculous disease. What the proportion is of these cases, which can be considered examples of phthisis, the data do not warrant us to say positively. The progress of bronchial phthisis is usually slower than that of the genuine pulmonary form, and the prognosis is certainly more favorable, in the former case, than in the latter; the organs primarily affected being less essential to life than the lungs.

"The termination of this disease is various. That the tuberculous state of the bronchial glands may be removed by absorption, as we see occur in the lymphatic glands of the neck, we have every reason to believe; but this is probably the less frequent termination. Another mode of cure is that by which the softened tuberculous gland empties itself into the bronchial tube with which it is in contact, by ulcerative absorption of the walls of the tube, as is shown in Dr. Carswell's beautiful plates. The matter being evacuated, the cavity in which it was contained gradually contracts till it is obliterated; and the cure, as far as this gland is concerned, is complete. The less frequent cure is that in which a portion of the gland, or rather of the tuberculous matter, remains in a cretaceous form."—*Clark*, 16.

The comprehensive survey which we have taken of the pathological characters, and of the more remarkable varieties of phthisis has occupied so much more space than we contemplated, that for the present we must close this article.

To discuss the subject of its treatment may engage our attention ere long. We have laid the foundation for sound and rational, and we may even add, successful practice, by pointing out distinctly what is the enemy we have to encounter, the warnings of its approach, its hidden and insidious attacks, the development of its movements, and the numerous and complicated machinery with which, as it advances, it assails the bulwark of life, and with which it finally obtains the inevitable victory of death. There is not a position in a physician's career, which requires the exercise of greater professional tact, of more collected, yet kind and humane feelings, of more unshaken self-possession, of more soothing pity, and of a more perfect knowledge of the resources of his art, what it can do, and what it cannot, and what it ought therefore not to attempt, than when he is called upon to attend one, in whom the early symptoms of pulmonary consumption have manifested themselves. How much depends upon the diagnostic decision which is then formed? If the physician can confidently and unhesitatingly satisfy himself of the true nature of the case from the beginning, how many weeks, and months, and even years of most perplexing anxiety, will be spared to himself, as well as to the poor sufferer! All our rational hopes of a successful treatment must be limited to the first stage of the disease; and when we are told of cures upon cures of confirmed consumption, we much fear, that the proclaimers of such success, are, if not willing impostors on the credulity of the public, mischievous dupes of their own ignorance. Independently of the serious, and too often irreparable mischief inflicted

on the structure of the lungs themselves, the widely extended dissemination of tuberculous deposits, in other structures and in other organs, must forbid any hopes of a cure in the advanced stages of the disease. M. Louis' Researches have shewn us that in a large majority of the fatal cases of phthisis, the stomach and more especially the intestines, the liver, and spleen, the various groupes of lymphatic glands, &c. are all deeply involved in the morbid change. As well then might we hope to tear a lusty tree from its bed, by dividing one only of its many roots, as to *cure* a case of pulmonary consumption, when the system is penetrated with the multitudinous evil.

Such vain endeavours are fraught only with reproaches against the quackery of the medical art, and with needless sufferings to the patient, on whom they are tried. A far more worthy object of useful and creditable exertion presents itself to the enlightened physician, in foretelling the threatened approaches of the deadly evil, in counteracting its early symptoms, and in the steady employment of those means, which are best calculated to arrest its progress.

In our next number we shall probably return to this subject, and bestow upon it that consideration which its importance demands.

Our opinion of the high merits of M. Louis' researches must be apparent from the attention with which we have treated them. To Dr. Cowan the thanks of the profession are due for having naturalised one of the most valuable productions of the foreign press, a work to which constant appeal and reference will be made by all future writers on phthisis.

THE TRANSACTIONS OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION. Instituted 1832. Volume III. 8vo. pp. 472. London and Worcester, 1835.

THIS volume has arrived too late to enable us to lay a complete account of its contents before our readers. It consists of an eloquent anniversary address from Dr. Conolly—of a Report on the Chemistry of the Blood, and on the present state of our Knowledge of Anatomy—of nine insulated essays or cases—of three Hospital Reports—a Biographical Sketch of the late Dr. Jackson, Inspector of Military Hospitals—of an Article of Medical Jurisprudence on the Bristol Case of Poisoning—and of a Report from Van Dieman's Land. Such are the contents of the volume before us, and all we can do, upon this occasion, will be to select one of the shorter articles for notice here, deferring the remainder until our next Number. The portion devoted to hospital reports will be fully reviewed in our Clinical Department. The paper to which we shall now allude is from the pen of Mr. James, surgeon of the Devon and Exeter Hospital, and already known in a favourable manner to the profession.

OBSERVATIONS ON SOME OF THE CAUSES WHICH INFLUENCE THE FORMATION OF GOOD OR BAD STUMPS, IN CERTAIN CASES OF AMPUTATION OF THE THIGH. By J. H. JAMES, Esq. Surgeon to the Devon and Exeter Hospital.

Mr. James remarks on the varieties of opinion that prevail, with respect to the best method of operating. But it would be difficult to discover a point in surgery or medicine on which varieties of opinion do not prevail. We may, there-

fore, pass them over, and content ourselves with stating Mr. James's observations. They are limited to the operation by the circular incision.

The surgeon's object is to save sufficient muscle to cover the bone, and sufficient integument to cover both. Bad stumps may result from an original defect in the operation, or from something wrong in the subsequent processes.

To avoid defects in the operation, there are many circumstances connected with the condition of the limb, that the surgeon should carefully consider. Supposing the limb to be healthy, or nearly so, Mr. James would draw attention to these general principles.

"The muscles ought to meet over the bone, and the integuments over the muscles; the object is to know how this may be best accomplished, indeed, why not always attained. The necessary quantity of integuments, as Mr. Hey has stated, may be ascertained by admeasurement (a practised eye will rarely require it;) but with respect to the other constituents, the muscle and bone, the quantity is not so easily determined. The proportion of the former saved may vary, both on account of its natural bulk at the part, which is less as we approach the knee, and also on account of the degree of contractility of the loose muscles, which will differ according to their condition at the time, and will be more or less affected by the application of a tourniquet, or other circular band. The proportionate diameter of the bone to other parts in the section, it is important to observe, will also differ materially: thus, its diameter considerably increases towards the knee, while that of the muscular flesh diminishes in the same ratio. The converse is true as we approach the middle of the thigh; and hence it sometimes happens with regard to amputation in the latter situation, that while the small extremity of bone is well covered with muscle, the surgeon may not have allowed sufficiently for the diameter of the limb at this point, so much exceeding that at the usual place, and if so, the integuments will be scanty, an evil always obviated by attention. It is not so if the section of the bone be made too near the knee; an error to which the directions of some approved authors would lead, or if the bone, at the lower part of the limb, be enlarged, or the muscles wasted by disease, as hereafter particularly stated; for in these various cases, although we may easily preserve an ample covering of integument, we shall fail in getting a cushion of muscle for the broad bone, unless we clear up the muscle from it to a considerable distance before sawing, a proceeding from which we shall reap this further advantage—that the section of bone will be made where the shaft is smaller." 221.

Mr. James considers next the deviations from a healthy condition of the limb, which are capable of affecting the formation of a good stump.

First. The skin may be loose and redundant. This is commonly the case in old people. Two evils result from saving an unnecessary quantity of skin; first, the facility thereby presented to the collection of matter: secondly, that, as in closing the stump we act upon the muscles by drawing down the integuments, we are deprived of this advantage when the latter are superabundant, and the muscles consequently will not meet over the bone, or if we persist in thus forcing them down, the integuments will form a loose pouch over its extremities. Mr. James conceives that the plan which has been recommended by some authors, of dividing the integuments (previously drawn up,) together with the loose muscles, by the first incision, is well adapted to these cases.

Secondly. When there is an excess of adipose substance, this is not unfrequently so redundant and so hard, as to prevent the accurate closure of the wound. During the process of suppuration, this will often disappear; but if its existence is recognized prior to the operation, Mr. James recommends the surgeon to incline the edge of the knife a little upwards in making the first incision.

"While upon this point, I may remark, that we are sometimes compelled to operate upon limbs in an anasarctous state; should this be the case in any considerable degree, it is not a bad plan to roll the limb firmly before the operation,

but even then, it is hardly possible completely to empty the cells, and there will be a drain of serum from the edges at first, which, however, if matters go on well, will soon subside. In these cases it is not safe to trust to the tourniquet." 223.

Thirdly. "The muscular flesh of the limb may be much changed in various ways: it may be simply emaciated; or it may be swollen and agglutinated, either from acute or chronic inflammation. In the first case, a good stump will hardly be formed, unless the bone is cleared high up; in the second, from want of contractility of the muscles, a similar proceeding will be essential; but it is to another degeneration that I now particularly solicit attention, in which, from long disuse, (the consequence of old-established disease in the knee or leg) scarcely any trace of muscle is left in the lower part of the limb; the fibre has been for the most part absorbed, and either we find mere fat in large quantity, or intermixed with a little fibre; or, what is not uncommon, the muscle converted into a sort of firm, gristly semiadipose matter, perfectly incapable of contracting under the knife. Now, in such cases as these, I cannot but suspect that either of the methods practised by M. Dupuytren, or Sir C. Bell, or those of many other surgeons would fail; they are all based upon the principle that the muscles contract as they are divided, which is not at all the case here; the only mode of forming a good stump, I apprehend in these cases, is by clearing and sawing the bone high." 223.

The muscles may not have degenerated, but their relative contractility may display great differences. For instance, the knee may have been for some time retained in a bent position. The flexors having already contracted, will contract little more upon division. But the extensor muscles, which have been in the same proportion on the stretch, will retract much more; if, therefore, both are divided in the same plane, the latter will be deficient, the former projecting. The separate division, at different heights, of these two classes of muscle, will enable us to overcome this defect; and the position of the limb, after the operation, may be so regulated as to give an advantage to the defective portion.

Fourthly. The state of the bone may be altered. When we amputate for necrosis of the thigh, the bone, periosteum, and adjacent cellular tissue may be greatly thickened, and the neighbouring muscles may be much agglutinated. Integument is the thing to be saved in such a case. If this can be effected without detaching it from the subjacent muscles, so much the better; if not, the knife must be employed.

Mr. James observes that a little care and consideration will often enable us to ascertain the presence of any of the preceding changes, before we perform the amputation. The state of the integuments as to looseness, or the reverse; as to thickness, or anasarca, may easily be determined by pinching them up, or rolling them, or other mode of examination. The thickness of the *bone* may often readily be felt, and in cases of necrosis it is very important it should be. The size of the *muscular portion* may be presumed, from a comparison of the limb with the other; its condition, from the degree of rigidity, or otherwise, under the integuments; from the power of distinguishing the bone beneath it, more or less readily; from the nature and duration of the disease, the position of the limb, and other concurrent circumstances. In fine, when we are likely to meet with bone of large relative diameter, we must take care to save sufficient integument; and, if muscle is deficient in quantity or contractility, it is important to clear it up high from the bone.

Mr. James next dwells on the progress of stumps after amputation. We extract the following not uninteresting observations.

"There can be no doubt that a high degree of inflammation, occurring after amputation, will, directly or indirectly, ruin any stump; partly by the disorganization it produces; partly by irritating the muscles to constant contraction; partly by compelling us to give up the circular roller, upon which so much depends; however, these points of surgery have been so fully handled, that it is unnecessary for me to dwell upon them. The evil consequences of redundancy

or deficiency of integument, have also been fully pointed out; but in connexion with this subject, it may not be amiss to observe, that there seems to be, in all cases of amputation, a disposition in the skin to relax or contract; the latter, if irritated; the former, if soothed. By soothing, a good covering is sometimes obtained, although there may have been a deficiency in the first instance; while, by irritating, a good stump is often spoiled. When this relaxing process does not take place kindly, it may be advantageously solicited by fomentations or poultices to the face of the stump, often without giving up the steady pressure of the roller above.

The condition of the muscular flesh will also produce a great influence on the progress of the stump; if that has been merely and simply emaciated, it is not at all uncommon to see it plump up after the operation, and, in consequence, a better cushion is, in many cases, afforded to cover the bone, than might have been at first expected; but on the other hand, it not unfrequently happens that the integuments, which at the time of the operation met easily, become separated by a considerable interval, in consequence of this enlargement of the muscular flesh. If, in these cases, both muscle and skin are early united over the bone, the stump will be much better than it promised to be at first, for the muscle will fill out, and the skin elongate; but if the union is long protracted, the edges of the integuments will be separated by the enlargement of the muscular flesh, and the stump prove defective. The reverse of this is the case when, before amputation, the size of the muscular portion has been augmented, either by recent inflammation, or where it consists largely of that semi-adipose structure which has just been described, both of which will waste during the suppurative process. Should the integuments have been at all deficient at the time of the operation, they will become slack and easy; and in this respect an important improvement will take place, provided it is only the parts subjacent to the integuments, which are constituted by false flesh, if I may so express myself; but if the integuments are also anasarcaous, or loaded with gelatinous effusion, they will likewise waste. In all these cases a perfectly plump stump will not be formed, unless the bone be cleared high up.

I have but one more remark to make on this subject, namely, that when the soft parts are deficient, and the bone prominent on the face of the stump, forcible attempts are often made to bring the integuments together by adhesive straps: these endeavours commonly fail, and are indeed, mischievous, for if the straps are brought over the surface of the bone, they then bind down this thin and irritable covering upon a hard surface, which is sure to indispose them to unite or do well; and if applied at the sides, although they may bring the edges together, yet they will force the soft parts still more back from the bone. The only remedy for such stumps, is to be found in good rolling, and proper position; or, these failing in sawing off the bone higher." 229.

Mr. James concludes by drawing a sort of analogy between the wound produced by amputation, and that occasioned by a compound fracture. But on this we need not dwell. We may confine ourselves to one practical remark:—That surgeons not unfrequently persist in the attempt at union by the first intention too earnestly and too long. If it does not succeed at once, the straps should be partially cut at all events, so as to prevent the confinement of matter, at the same time that the bandages are left sufficiently undisturbed to obviate the danger of what union there may be, giving way.

Mr. James believes that the outer surface of the bone, being inflamed, not unfrequently furnishes a deposit of ossific matter, in which the nerves may be engaged, and into which they may be pressed by the bandages and straps. Pain, heat, and *solid* swelling are the signs of this condition; leeches, evaporating lotions or poultices, and blisters are the treatment.

We recommend the preceding remarks to the surgical portion of our readers.

THE EPIDEMICS OF THE MIDDLE AGES. From the German of J. F. C. Hecker, M.D.; translated by B. G. Babington, M.D. Octavo, pp. 206. Sherwood and Co. 1835.

GERMAN industry, so proverbial for its indefatigability, has collected in three parts, the accounts of three wide-spread devastations—the “black death” (already noticed in our pages, vol. xix. p. 121)—the “dancing mania”—and the “sweating sickness.” Although we cannot help thinking that the time and labour employed in such researches as these might be better expended on other subjects, more directly mixed with our daily pursuits, yet we do not mean to deny all utility to these investigations of the erudite German. We have no doubt that, whatever may have been the nature of the black death, and the sweating sickness, the dancing mania had much to do with mind, and the investigation of this epidemic may probably induce the medical philosopher to admit, that the imagination has a larger share in the production of disease than is generally supposed.

“He has, no doubt, already observed, that joy will affect the circulation, grief the digestion, that anger will heat the frame as perniciously as ardent spirits, and that fear will chill it as certainly as ice; but he may not have carried his observations to the extent of perceiving, that not only single and transient effects, but specific diseases are produced through the agency of mental impressions, and he may therefore still be surprised to find that the dances of St. John and of St. Vitus, as they formerly spread by sympathy from city to city, gave rise to the same deviations from bodily health, in all the individuals whom they attacked; that Tarantism was the same disease, whether medically or morally considered, all over Italy; and that the ‘Lycanthropia’ of the past, and the ‘Leaping Ague’ of the present times, have each its respective train of peculiar symptoms.” ix.

The moralist will view the matter according to the bent of his own preconceptions or favourite theories, and will probably come to the conclusion, that the ignorance and superstitions of those dark ages were the main causes that subjected the body to the influence of a morbid or excited imagination. The march of intellect and the spread of knowledge have checked these vagaries in our days—but not annihilated them. They have changed their forms rather than their nature, and have entrenched themselves behind a thousand *little* masks, in the Protean host of dyspeptic and hypochondrical affections, instead of coming forward in one grotesque and gigantic monstrosity—like the *dance* now under consideration.

In a very short preface, the author broaches a curious idea—though not altogether new—“that the human race, amidst the creation that surrounds it, moves, in body and soul, as an *individual whole*.” Under this grand conception, we might suppose that *epidemics* are to this whole—this *entity*, or collective organic life—what constitutional diseases, as fevers, are to the individual; while *endemics* will correspond with those topical affections—as hepatitis, pneumonia, &c. that affect certain localities of the human body. The idea, after all, is inferior to the conception of the bard of Twickenham—

“All are but parts of one stupendous whole,
Whose body Nature is, and God the soul.”

And, moreover, such an hypothesis would not be of the slightest interest, as it would never bear, in the remotest degree, on any one branch of medical

science. We may, therefore, leave this brilliant flight of the imagination to repose tranquilly, among the archives of German dreams and transcendental speculations.

The terrors of the black death had not subsided, and the graves of millions of its victims were scarcely closed, when a strange delusion spread over Germany, and "instead of the divinity of our nature, hurried away both body and soul into the magic circle of hellish superstition." This was a convulsion which agitated the human frame in a most extraordinary manner, exciting the astonishment of philosophers, physicians, divines—indeed of all men, for more than two centuries, since which it has totally disappeared. This was the "*CHOREA ST. VITI*," so termed on account of the Bacchantic leaps by which it was characterized, and the foaming fury that possessed the performers. It was propagated by the sight of the sufferers, like a demoniacal epidemic, over the whole of Germany, and the neighbouring countries to the north-west. In 1374, assemblages of people were seen at Aix-la-Chapelle, united by one common delusion, and exhibiting in the streets the following degrading spectacle.

"They formed circles hand in hand, and appearing to have lost all control over their senses, continued dancing, regardless of the bystanders, for hours together, in wild delirium, until they at length fell to the ground in a state of exhaustion. They then complained of extreme oppression, and groaned as if in the agonies of death, until they were swathed in clothes bound tightly round their waists, on which they again recovered, and remained free from complaint until the next attack. The practice of swathing was resorted to on account of the tympany which followed these spasmodic ravings, but patients were frequently relieved in a less artificial manner, by thumping and trampling upon the parts affected. While dancing they neither saw nor heard, being insensible to external impressions through the senses, but were haunted by visions, their fancies conjuring up spirits whose names they shrieked out; and some of them afterwards asserted that they felt as if they had been immersed in a stream of blood, which obliged them to leap so high. Others, during the paroxysm, saw the heavens open, and the Saviour enthroned with the Virgin Mary, as indeed the religious notions of the age were strangely and variously reflected in their imaginations.

Where the disease was completely developed, the attack commenced with epileptic convulsions. Those affected fell to the ground senseless, panting and labouring for breath. They foamed at the mouth, and suddenly springing up began their dance amidst strange contortions. Yet the malady doubtless made its appearance very variously, and was modified by temporary or local circumstances, whereof non-medical contemporaries but imperfectly noted the essential particulars, accustomed as they were to confound their observation of natural events with their notions of the world of spirits." 5.

In a few months, this epidemic spread from Aix over the Netherlands, and the heavy-headed, broad-bottomed Belgians danced with all the agility of a Gallic "*maitre de danse*." These dances manifested a strong antipathy to narrow-toed shoes, red colours, and lachrymation. The complaint was originally confined to the lower classes of society; but the priests took great pains to exorcise the evil spirits, which they believed to have taken possession of these people, lest the devils should get among themselves and the laity. We deem it unnecessary to follow the author from town to town, and from province to province, describing the same mania over and over again, as it happened to be modified by the different manners, customs, habits, or localities where it prevailed. We think Dr. Hecker has been

needlessly minute and prolix in this respect, and very few medical readers will follow him through all the labyrinths of his descriptions.

Causes. So far back as the 14th century, St. John's day was solemnized with all sorts of strange and rude customs,—especially bacchanalian dances, &c. which were observed not only in Germany, but in many countries south of that nation. Dr. H. therefore connects the origin of the dancing mania at Aix, with the festival of St. John, A.D. 1374.

“This is rendered so much the more probable, because some months previously the districts in the neighbourhood of the Rhine and the Maine had met with great disasters. So early as February, both these rivers had overflowed their banks to a great extent; the walls of the town of Cologne, on the side next the Rhine, had fallen down, and a great many villages had been reduced to the utmost distress. To this was added the miserable condition of Western and Southern Germany. Neither law nor edict could suppress the incessant feuds of the Barons, and in Franconia especially, the ancient times of club law appeared to be revived. Security of property there was none; arbitrary will everywhere prevailed; corruption of morals and rude power rarely met with even a feeble opposition; whence it arose that the cruel, but lucrative, persecutions of the Jews, were in many places still practised through the whole of this century, with their wonted ferocity. Thus, throughout the western parts of Germany, and especially in the districts bordering on the Rhine, there was a wretched and oppressed populace; and if we take into consideration, that among their numerous bands many wandered about, whose consciences were tormented with the recollection of the crimes which they had committed during the prevalence of the black plague, we shall comprehend how their despair sought relief in the intoxication of an artificial delirium.” 25.

The festival, he thinks, brought the malady to a crisis, though its causes had long before been in operation, in weakening the mind, and disordering the digestive organs.

Our author goes on to trace this dancing mania to periods still more remote, and of which imperfect record may still be traced in the libraries of the curious. It was not, however, till the beginning of the sixteenth century that Paracelsus stripped this mania of its mystic and unhallowed character, as a work of dæmons, and traced it to moral and physical causes. He would not admit that the saints had power, or that God was likely to have the will to torment men by diseases. He therefore divides Chorea St. Viti into three kinds—that which arises from imagination (the original form)—that which springs from sensuality (Chorea Lasciva)—and that which depends on corporeal maladies. The communication of disorders by sympathy is strongly insisted on by this original medical reformer, in his own peculiar language, and with great spirit and knowledge of human nature. It was in Paracelsus's time that the dancing mania began to decline—and ultimately to disappear.

Dr. Hecker next proceeds to give an account of the tarantism, or dancing mania of Italy. The St. Vitus dancers were fortunate in the name of their patron saint, which often saved them from opprobrium, and the charge of being possessed by demons. Other fanatics were not so fortunate, being frequently treated with the most relentless cruelty—instance the burning of witches, &c. &c. The disease called TARANTISM, first broke out in Apulia, and thence diffused itself over Italy, where it prevailed as an epidemic during some centuries. Like St. Vitus's dance, lycanthropy, and witchcraft, it has

now disappeared, or lost observation, in consequence of being confined to some few insulated cases that are included under the head of hysteria or monomania. It is hardly necessary to state that tarantism was supposed to result from the bite of the tarantula, a spider formerly common in Italy, but the species of which, is now not recognized—none at least, whose poisonous sting will now produce the disease called tarantism.

“The symptoms which Perotti enumerates as consequent on the bite of the tarantula agree very exactly with those described by later writers. Those who were bitten, generally fell into a state of melancholy, and appeared to be stupified, and scarcely in possession of their senses. This condition was, in many cases, united with so great a sensibility to music, that, at the very first tones of their favourite melodies, they sprang up, shouting for joy, and danced on without intermission, until they sunk to the ground exhausted and almost lifeless. In others, the disease did not take this cheerful turn. They wept constantly, and as if pining away with some unsatisfied desire, spent their days in the greatest misery and anxiety. Others, again, in morbid fits of love, cast their longing looks on women, and instances of death are recorded which are said to have occurred under a paroxysm of either laughing or weeping.” 66.

We need scarcely observe that the foregoing symptoms could have had nothing to do with the bite of a poisonous animal. The latter would have exhibited a very different train of phenomena. The following reasoning is far more germane to the subject.

“The origin of tarantism itself is referrible, with the utmost probability, to a period between the middle and the end of this century, and is consequently contemporaneous with that of the St. Vitus's dance (1374). The influence of the Roman Catholic religion, connected as this was in the middle ages, with the pomp of processions, with public exercises of penance, and with innumerable practices which strongly excited the imaginations of its votaries, certainly brought the mind to a very favourable state for the reception of a nervous disorder. Accordingly, so long as the doctrines of Christianity are blended with so much mysticism, these unhallowed disorders prevailed to an important extent, and even in our own days we find them propagated with the greatest facility where the existence of superstition produces the same effect in more limited districts, as it once did among whole nations. But this is not all. Every country in Europe, and Italy, perhaps more than any other, was visited during the middle ages by frightful plagues, which followed each other in such quick succession, that they gave the exhausted people scarcely any time for recovery. The oriental bubo-plague ravaged Italy sixteen times between the years 1119 and 1340. Small-pox and measles were still more destructive than in modern times, and recurred as frequently. St. Anthony's fire was the dread of town and country, and that disgusting disease, the leprosy, which, in consequence of the crusades, spread its insinuating poison in all directions, snatched from the paternal hearth innumerable victims who, banished from human society, pined away in lonely huts, whither they were accompanied only by the pity of the benevolent and their own despair. All these calamities, of which the moderns have scarcely retained any recollection, were heightened to an incredible degree by the Black Death, which spread boundless devastation and misery over Italy. Men's minds were everywhere morbidly sensitive; and as it happens with individuals whose senses, when they are suffering under anxiety, become more irritable, so that trifles are magnified into objects of great alarm, and slight shocks, which would scarcely affect the spirits when in health, give rise in them to severe diseases, so it was with this whole nation, at all times so alive to emotions, and at that period so sorely pressed with the horrors of death.” 74.

We deem it not necessary to follow our indefatigable author through all the windings of this mysterious epidemic—nor to effects of the grand remedy—**MUSIC**.

“Nothing but the flute or the cithern afforded them relief. At their sounds they awoke as it were by enchantment, opened their eyes, and moving slowly at first, according to the measure of the music, were, as the time quickened, gradually hurried on to the most passionate dance. It was generally observable that country people, who were rude, and ignorant of music, evinced on these occasions an unusual degree of grace, as if they had been well practised in elegant movements of the body; for it is a peculiarity in nervous disorders of this kind, that the organs of motion are in an altered condition, and are completely under the control of the overstrained spirits. Cities and villages alike resounded throughout the summer season with the notes of fifes, clarinets, and Turkish drums; and patients were every where to be met with who looked to dancing as their only remedy.” 76.

The prevalence of tarantism having rendered the nervous systems of people inordinately sensitive, the various forms of hysteria became also prevalent, and very often took on the exterior of tarantism itself. Dissimulation lent a powerful hand to the real maladies, and increased the numbers prodigiously. This dancing mania or tarantism prevailed during the whole of the 17th century—and Baglivi, one of the best physicians of that time, made it the subject of a dissertation. He supports his history of the symptoms by the testimony of his father, who was an eye-witness of the epidemic. It declined and fell in the beginning of the 18th century, “when all the links which connected it with the middle ages had long since snapped asunder.”

The author goes on to describe the dancing mania of Abyssinia—called the Tigretier, from its prevalence in the Tigrè country. The account is chiefly taken from Pierce, “who is every way worthy of credit,” and whose descriptions are equally lively and amusing. We cannot, however, bring ourselves to pursue the subject farther—referring those who are curious to the work itself, where they will also find some interesting notices of later epidemics of this kind, such as the jumpers of Cornwall, the convulsions of certain cotton-factories in Lancashire, of Shetland, Berlin, &c. &c. In an appendix, the translator, among some curious morceaus, has given us the tarantula dance song, set to music by Athan. Kircher, Rome, 1654. It may prove useful in some of the modern chapels, where strange tongues are learnt by inspiration, and where the “*ANTIDOTUM TARANTULÆ*,” will be an excellent accompaniment.

SKETCH OF THE HISTORY OF MEDICINE, FROM ITS ORIGIN TO THE COMMENCEMENT OF THE NINETEENTH CENTURY. BY *J. Bostock*, M.D. 8vo. Sherwood and Co. 1835.

As the history of man is little more than the history of crime—so, that of medicine is little better than a record of follies, and an emblazonment of our shame. As long as this history was prefixed to, or interwoven with

medical works on a large scale, and confined to medical readers, there was likely to be advantage derived from the perusal—more perhaps in consequence of the humility taught us, than from any direct knowledge not communicated through the ordinary channels of education. But when these archives of our *conjectural art* are popularized, and diffused through the widening circles of the reading public, we anticipate a rich crop of ridicule to our profession, in addition to that which is daily reaped by most of its members. The following extract from a literary journal, of wide circulation and considerable influence, will amply illustrate our meaning.

“Moliere makes one of his characters declare that ‘he knows not a pleasanter farce than that of one man attempting to cure another;’ and truly, the perusal of this little volume has gone near to make us of the same opinion. Here is a history of the Art from the time of the Assyrians, down almost to the year of grace in which we are writing, from which it clearly appears, that mankind, during that long interval, have lived either wholly without medical advice, or died, dividing their confidence between theorizing pedants and blind empirics. Systems have changed, methods of cure have flourished and decayed, the most opposite and conflicting remedies have been employed, and men have boasted of their success; but science has continued uninterruptedly its mill-horse circle, covering the same two grains of idea with two bushels of words, and changing only its language from century to century, as if in fear lest men, becoming familiarized with the terms, should detect their emptiness of all meaning, and ‘throw physic to the dogs.’”*

And again—

“As a matter of whim, however, and as Jeremy Diddler says, ‘just by way of curiosity,’ we would ask what the state of medicine is, not in the history of the past, but now in the noonday blaze of the nineteenth century,—divided, as everybody knows it to be, between the homœopathic administrators of quintillionth doses, the antipathic composers of eight ounce mixtures, and the Mesmerite mystics, not forgetting the charlatanism of the scarifiers *à la* St. John Long, and the unreasoning follow-my-leader-ism of the the third and fourth rate prescribers, who form the mass of every-day practitioners?”

The plain truth of the matter is, that Physic is merely the younger sister of Theology; and that there is as utter, and as general an incapacity among the patients to give a reason for the faith that is within them, in the one faculty as in the other. The early physicians were professedly, at once, divines, enchanters, and apothecaries; witness the Plutus of Aristophanes, and the history of the impostor Apollonius by Lucian: even still, traces exist of this union of the natural and the supernatural, in the remnants of judicial astrology among the old-lady herbalist, in the superstition of not cutting the nails on a Friday, &c. *Quo semel est imbuta.*

It is indisputably true, that in latter years, this association has been somewhat severed, and that since the dissemination of the Baconian philosophy, physiology, the only solid basis of medical reasoning, has made great strides. The physicians of the present age, when they happen to possess common sense, may now argue upon something like established fact. They see and observe with greater accuracy, and draw sounder conclusions from their premises; but still, as far as mere theory is concerned, the *vis dormitiva*, by which Dr. Last explained the efficacy of opium, is the highest flight to which medical philosophy has attained.”†

* Athenæum, March 28th, 1835.

† Ibid.

Such are the reflections excited in the mind of a literary journalist by the perusal of Dr. Bostock's erudite and elaborate "**HISTORY OF MEDICINE**," and we have no doubt that such will be the effects on most *lay* minds, who have the curiosity to go through the labyrinths of medical theory and practice, as delineated by the talented author of the work before us. We are sorry, therefore, that it has been detached from the "*Cyclopædia of Practical Medicine*," in which it originally appeared, because it can hardly expect any *additional* diffusion among the profession, in its monographic form, while it may afford pabulum for satire to those extra-professional spirits that delight in ridiculing physic—till they happen to want its assistance.

The history of medicine, itself, pregnant as it is with superstitions, errors, and absurdities, is still a useful portion of study. It enlarges the mind, extends our views, and fixes the great epochs of discovery and improvement more firmly in our memory. To those who are possessed of Le Clerc's History of Medicine, or of Sprengel's History of Medicine, (which brings down the account till the year 1818,) Dr. Bostock's book will be of little use, as containing little or nothing which may not be found in the works alluded to. The materials, however, are neatly abbreviated, and the reflections are happily expressed. As but few, comparatively speaking, possess either Le Clerc or Sprengel, the abstract of medical history drawn up by Dr. Bostock, will prove an acceptable present, and as such we recommend it.

It is curious that Dr. Bostock has stopped short, in his History of Medicine, at the close of the last century, thus leaving 35 years untouched! The short chapter (xiii.) containing "cursory remarks on the state of medicine since the commencement of the present century," contains no attempt at history—and why?—because, "as the historian of medicine approaches nearer to his own times, he finds his path encumbered with almost insurmountable difficulties." We are told by Dr. Bostock that "our actual information does not increase, *in any degree*, in proportion to our experience." Hence, says he, "it follows that the accumulation of materials frequently rather retards than promotes its progress." Now if every historian of medicine were to shirk the quarter or half century that bordered on his own times, how would the history of medicine be carried down from period to period? We strongly suspect that our worthy author broke off, when he found no *other* history of medicine ready cut and dry for him to work upon; and that he did not like the trouble of compiling a history of his own times from original documents. The following passage on the fallacy of experience we shall extract.

"In modern times, and more remarkably in Great Britain, no one thinks of proposing a new mode of practice without supporting it by the results of practical experience. The disease exists, the remedy is prescribed, and the disease is removed; we have no reason to doubt the veracity or the ability of the narrator: his favourable report induces his contemporaries to pursue the same means of cure, the same favourable result is obtained, and it appears impossible for any fact to be supported by more decisive testimony. Yet in the space of a few short years the boasted remedy has lost its virtue, the disease no longer yields to its power, while its place is supplied by some new remedy, which, like its predecessors, runs through the same career of expectation, success, and disappointment.

Let us apply these remarks to the case of fever, the disease which has been styled the touchstone of medical theory, and which may be pronounced to be its opprobrium. At the termination of the last century, while the doctrine of Cullen was generally embraced, typhus fever was called a disease of debility, and was of course to be cured by tonics and stimulants. No sooner was it ascertained to exist, than bark and wine were administered in as large doses as the patient could be induced, or was found able to take. No doubt was entertained of their power over the disease; the only question that caused any doubt in the mind of the practitioner was, whether the patient could bear the quantity that would be necessary for the cure.

To this treatment succeeded that of cold affusion. The high character and literary reputation of the individual who proposed this remedy, its simplicity, and easy application, the candid spirit which was manifested, and the strong testimonials which were adduced by his contemporaries, bore down all opposition, and we flattered ourselves that we had at length subdued the formidable monster. But we were doomed to experience the ordinary process of disappointment; the practice, as usual, was found inefficient or injurious, and it was, after a short time, supplanted by the use of the lancet. But this practice was even more short-lived than either of its predecessors; and thus, in a space of less than forty years, we have gone through three revolutions of opinion with respect to our treatment of a disease of very frequent occurrence, and of the most decisive and urgent symptoms." 229.

Has it never suggested itself to Dr. Bostock's mind that fevers differ very much in their nature, at different periods, and in different constitutions of the atmosphere? We are perfectly certain that we have seen the fevers of one year so different from those which occurred a few years afterwards, as to sanction the differences of treatment alluded to by Dr. Bostock.

In remarking on the utility of medical journals and medical societies, Dr. B. goes rather out of his way to hold up the French Journals as models for us here in England—and he invidiously declares that "the medical periodicals of London are decidedly excelled by those of Edinburgh and Dublin." Now, we believe that we have never been accused of the attempt to depreciate our contemporaries, either British, continental, or transatlantic, and the remarks which we here make are forced from us by Dr. Bostock's invidious comparison. We tell Dr. Bostock then, that we hold his judgment on the subject, in very low estimation, when he proposes the Parisian journals as models for imitation. Then as to the comparative merits of the medical journals emanating from the three capitals of the united kingdom, how are we to form the estimate? By the extent of the circulation? If Dr. B. knows anything of the matter, he must be aware that, tried by that test, his position is untenable. By republication in foreign lands? In that case his judgment must be impugned. In what way, then, has Dr. Bostock come to his conclusion? Just by prejudice, and by a waspish huff taken against metropolitan medical journals, from some cause or causes best known to himself. Notwithstanding this piece of *ill-judged* judgment, we shall not be so narrow minded as to depreciate his History of Medicine by comparison with Le Clerc or Sprengel. We leave the comparison to Dr. Bostock's own conscience, for we see ample proof that the author is *intimately* acquainted with the works in question.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NEW YORK. Vol. I.
1832-3.

WE have not been able to procure the above work, and must therefore take the following short analysis of it from one of our transatlantic contemporaries, (the Baltimore Medical Journal,) now, we grieve to say, no more. We find, by a notice at the end of the second volume of the above work, that the labours of the industrious and learned editor, Dr. Gedings, have terminated, as far as journalism is concerned. We hope the real cause of this premature decease of our contemporary is the one assigned—want of leisure on the part of the Editor—not want of patronage on the part of the public. Periodical literature, however, like every other species of intellectual commerce, is fast overflowing, and individual losses as well as mortification must be the inevitable consequence. Journals, and more especially **REVIEWS**, are peculiarly liable to this commercial glut and stagnation. It is a difficult thing for one work to supplant another, unless great negligence or inability is displayed on one side; and it is still more difficult to create a demand in the public market for the same thing twice over—which the review of a book must be, in two journals. Reviews *must* now be analytical, rather than critical. Reviewers, like ministers, *must* run in a groove—and if they get out of that groove they are lost. Time past has furnished illustrations, and time to come will exhibit more. But this is a digression.

On the 7th of February, 1832, the Medical Society of the State of New York, while in session in Albany, resolved to publish its transactions in a permanent form. The publication is destined to embrace successful prize dissertations, addresses made from year to year by the President, the medical topographical reports, made by the respective County Medical Societies, proceedings of the Society, &c. &c.

The committee charged with the execution of this plan have published the volume before us. It is very creditable to the professional zeal of the New York Medical Society.

The initial article of part one, is a prize dissertation on delirium tremens, by James Conquest Cross, M.D, of Lexington, Kentucky.

After treating on the literary history, name, etiology, and general character of the disease, Dr. Cross considers its varieties. He enumerates no less than four, viz.—1. The Sthenic; which consists in vascular irritation, or a condition, which doubtless predisposes to, and frequently terminates in, inflammation. 2. The Hypersthenic; this consists in inflammation. 3. The Asthenic; consisting in nervous irritation. 4. The Bilious; which consists in the supervention of delirium tremens upon bilious fever. Dr. C. does not relish the praise which journalists have bestowed on the essay of Dr. Coates, on delirium tremens. He thinks Dr. Coates has not fairly represented the disease. The remarks of this gentleman, that *pain* has never been observed by him in delirium tremens, either in the head, or in any other part of the body; that *increased heat*, like pain, has never occurred in the cases under his observation, unless where it already existed, as the product of a previously existing malady; and that the pulse, according to his observations, is generally weak, are considered by Dr. Cross so unfaithful an account of de-

lirium tremens, as to "betray a manifest and reprehensible unwillingness to admit, as attributes of this disease, any of those symptoms that denote the existence of sthenic or hypersthenic action." Dr. Cross has here levelled six pages of criticism at Dr. Coates' essay. He admits it possesses intrinsic excellence, but, "it unfortunately happens, that his views, and those of that very respectable physician, (Dr. Coates,) wage against each other a war of mutual extermination!" Each of these authors will find in the other a formidable combatant, and we hope their discussion will more fully elucidate the disease. Dr. Cross next treats of the prognosis, diagnosis, and necroscopic reports. Twenty-six pages are then devoted to a discussion on the proximate cause of delirium tremens. This, he attempts to demonstrate, consists originally either in vascular irritation, actual inflammation, or nervous irritation of the liver, and, subsequently, of the brain.

Treatment of Delirium Tremens.—On the use of the lancet Dr. Cross says—the necessity for either general or local blood-letting does not frequently occur in *sthenic delirium tremens*. In *hypersthenic delirium tremens*, the indication is much plainer, and the propriety of the general detraction of blood is frequently imperious and necessary. The following remarks of Dr. Coates, when applied to *asthenic delirium tremens*, meet with the author's fullest approbation. "My own experience leads me distinctly to say, that the lancet does not appear to have the least discoverable effect, positive or negative, upon the delirium, and that it actually does harm to the patient, by diminishing his strength, an item highly necessary to the cure." Doctor Cross has never ventured on the use of the lancet in *bilious delirium tremens*; he has occasionally detracted blood locally, not however without its propriety being clearly indicated.

Of Emetics.—In sthenic delirium tremens, it will be rarely necessary to use emetics. They should be wholly proscribed in the hypersthenic. It is in the asthenic and bilious varieties that our emetics are strongly indicated and particularly useful.

Cathartics.—No variety of delirium tremens has ever deterred the author from using cathartics; although they are beneficial, they are far from being so to an equal extent, in every species. He prefers calomel, aloes, and rhubarb.

Opium.—Twenty-five pages are given to a consideration of this celebrated remedy. In *sthenic delirium tremens*, after the bowels have been freely opened and the liver stimulated to the production of a copious discharge of bile, by the action of a dose of calomel, aloes and rhubarb, if the pulse should be soft and compressible, the author commences the exhibition of calomel and opium conjoined. Twenty grains of the former and three of the latter is his ordinary dose at the commencement. In three hours the opium alone is repeated, and in three hours more the same quantity of calomel and opium. In two or three hours after the exhibition of the last dose, fifteen grains of aloes, with the same quantity of rhubarb are given. This simple plan has never failed but in one single instance. In *hypersthenic d. tremens*, before using opium, the lancet and cathartics should be employed until the pulse becomes soft and compressible. Two or three days will be required for this preliminary treatment in a majority of cases. It will moderate the primitive inflammation of the stomach, and the secondary inflammation of the brain, so as to enable the opium and calomel to act efficiently.

In this variety, the author rarely commences with less than four grains of opium, and half a drachm of calomel.

In *asthenic* d. tremens the author purges previous to the administration of opium. If a suitable dose of calomel, aloes and rhubarb, does not operate, he recommends one drop of croton oil every two hours. In this variety, as the irritation is exclusively nervous in its character, the necessity of adding calomel is not so imperious. Three grains of opium every three hours, are recommended, by the author, after the preliminary treatment. In the early stage of *bilious* d. tremens, the author purges as before with calomel, aloes and rhubarb. On the pulse becoming soft and compressible, he uses the following prescription, to excite the liver, to extinguish nervous irritation, and to support the strength of the system, viz.

Calomel, gr. v.

Syrup of Morphine, ʒij.

Sub. Carb. Ammo. gr. iv.

This dose is given, according to circumstances, every three, four, or five hours.

Dr. Cross next makes remarks on camphor, henbane, atropa belladonna, tela araneæ, hops, blisters, cold affusions, pediluvia, ardent spirits and moral treatment. In the hypersthenic variety, he has seen a blister on the epigastrium, greatly diminish cerebral determination and excitement. The precordial oppression in the asthenic and bilious varieties, receives signal relief from blisters, used as auxiliaries to emetics and cathartics. Respecting ardent spirits, Dr. C. says: "It should enter as a precept into the science of medical ethics, that ardent spirits should never be administered as a remediate agent in the treatment of any disease, unless it is imperiously required by emergencies, and circumstances too, where no substitute can be employed of great efficiency." He deprecates the use of this remedy in any variety of delirium tremens, in strong terms.

In the adynamic stage of this disease, Dr. C. has used with most advantage, the subcarbonate of ammonia, sulphate of quinine, sulphuric ether, assafœtida and opium. The remainder of Dr. C's. dissertation contains cases.

ARTICLE II. This is an address on Puerperal Fever, delivered before the Medical Society, by Jonathan Eights, M. D. of Albany, its president, (1832.) Dr. E. regards puerperal fever as a pure inflammatory affection in its original state. He thinks it doubtful whether the disease ever appears as an epidemic; where it seems to assume this character, it is under the influence of some other prevailing disease.

Admitting the disease to be inflammatory, Dr. E. seeks for "its location or primary seat." He determines it is in the uterus, and that the contiguous parts become affected from this source. His argument is drawn from post-mortem examinations made by order of government, in the lying-in institution in Vienna. The result of this inquiry was, that almost in every case examined after death, there were evident marks that the primary disease was in the uterus.

"From the result of the above investigations," says Dr. E. "we may come to the conclusion, that when the contents of the gravid uterus have been expelled in parturition, the orifices of the uterine veins, where the placenta had been

attached are left open, and most probably a communication is indirectly formed between the venous system and the atmospheric air: such a condition of the uterine veins, in consequence of the separation of the placenta, must be favorable to the production of inflammation, which, once excited, is seldom limited to the orifices of the vessels, but extends, with more or less rapidity, along the continuous membranes of the veins of the uterus, until a general affection is produced. The muscular substance of the uterus also becomes affected from this local source; this is communicated to the peritoneal covering, and the usual symptoms of puerperal fever will ensue."

The following remarks of Dr. E. are important and judicious.

"There is a disease, however, not unfrequently met with in the parturient state, which, from its symptoms, so closely resembles puerperal fever, as often to deceive a critical observer. It comes on a few days after delivery, with diffused pain and tenderness over the whole abdomen, and with a pulse somewhat accelerated. I have never observed it unless after the exhibition of a cathartic, acting too freely, at other times not sufficiently, producing severe gripings, and an irritable state of the bowels. The usual remedies for inflammation, viz. bleeding, purging, &c. do much injury, and if persisted in will prove fatal to the patient. Instances are on record of several who have died from active depletion, and upon examination, not a vestige of inflammation has been discovered, either in the uterus or peritoneum, and only a few ounces of colorless fluid have been found in the cavity of the abdomen. It is most frequent among women who are of delicate health and sensitive nerves.

This attack, besides the operation of a cathartic, may originate from severe and protracted after-pains passing into a permanent state, and, not unfrequently, no evident cause can be assigned.

The pulse, although somewhat quickened, is soft and feeble, and often perfectly natural; the skin remains cool, and the tongue clean, and no tumefaction or enlargement of the abdomen is discovered. These cases are not of themselves dangerous, provided the nature of them be not mistaken, nor improper remedies employed. The compound powder of ipecacuanha, warm fomentations, emollient injections, frictions over the abdomen, with anodyne liniment, in every instance relieve it."

The causes alluded to here, are analogous to those referred to by Marshall Hall, in the section on irritation, in his "researches, &c. on the loss of blood." Dr. E.'s remarks on the treatment of puerperal fever, refer to blood-letting, cathartics, fomentations, blisters, diaphoretics, calomel, oil of turpentine and emetics; the two last he condemns.

ARTICLE VI. Is an annual address on Asiatic Cholera, by Thomas Spencer, M.D. President of the Society, (1832.) The following recapitulation exhibits Dr. Spencer's view on the pathology of the several stages of cholera:—

First State.—1. The epidemic influence being thrown upon the exhalent tissues of the small intestines, renders it highly susceptible to the action of irritants, so that the imperfectly digested food of mild laxatives often excite profuse evacuations, and there is thus produced a disposition to violent disease from the common exciting causes of diarrhœa.

2. The stomach being weakened in its function, digestion is imperfectly performed, and at times almost suspended.

3. The liver responding to the stomach from its habitual sympathetic relations with that organ in health, falls into a state of torpor, and bile is no longer secreted.

Second Stage.—1. The disease essentially consists, in this stage, in a determination of fluids to the inner surface of the small intestines, diverting the respiratory, perspiratory, and urinous discharges, with their neutral salts, from their usual channels; *and discharging them through the intestinal exhalents*, rapidly emptying the blood-vessels of their contents, and changing the relative proportions of the remnant of circulating fluids.

2. That the failure of the functions of the heart, lungs, capillary circulation, and various secretions, results from direct depletion, depriving those organs of their accustomed stimulus.

3. The absorbent system is rapidly taking up the adipose and waste parts of the body, to supply the failing resources of the heart, and thus results the rapid emaciation.

4. The spasms of the voluntary muscles, and those drawn into contractions in the act of vomiting, by compressing the intestinal exhalents, tend to arrest the discharges; and by aiding the return of the venous circulation, stimulate the heart to redoubled exertion, giving a centrifugal direction to the circulation, thereby making a metastasis of the exhalation from the inner surface of the bowels to the skin.

5. That a striking analogy exists between this disease and hæmorrhage, differing only in its effects upon the constitution, from the circumstance of its changing the relative proportions of the ingredients of the blood.

Third Stage.—1. Collapse consists in direct debility and failure of the functions of life, caused by the sudden loss of the stimulus of distention of the heart and bloodvessels, which do not readily contract down upon their contents.

2. The qualities of the blood are changed, from the previous discharge of some of its elements, while the others are retained.

Fourth Stage.—This stage consists essentially in fever of a low type to which is often added local disease.



DES CONVULSIONS CHEZ LES FEMMES, PENDANT LA GROSSESSE, PENDANT LE TRAVAIL, ET APRES L'ACCOUCHEMENT. Par A. Velpeau. Octavo, pp. 136.

M. VELPEAU very justly remarks, that the adoption of a single appellative, such as convulsion, fever, &c. to designate a train of morbid symptoms, which are neither steady nor uniform in their features, succession, causes, or effects, has induced much practical evil into the pursuits of medicine. Convulsions, like fever, are only terms, which signify the existence of certain phenomena, or train of phenomena, without any reference to the pathological states which give rise to them. True, indeed, it is, that in the present state of our knowledge, we are far, very far, from the attainment of such precision in our enquiries after the actual and essential nature of almost any malady, to justify the introduction of a purely pathological nomenclature; and perhaps we hazard little in asserting, that such exact informa-

tion can never be reached. The animal body is something more than a mere wondrous machine, consisting of visible parts and organs, whose actions, although silent, are ever active with incessant play; these actions we may, indeed, examine and investigate, tracing their effects, concatenations, and the influences which promote or disturb them; but beyond this we cannot go: we see, for example, that a muscle moves when its nerves are irritated, or when the messages of the will are sent along them; but who can tell what is the nature of the changes which take place in the state of the nerves at the time? Now, if we are so ignorant of the mysteries of a healthy function, surely we cannot be surprised that the "primum mobile" of its morbid or abnormal phenomena should be hidden from our ken.

These few remarks, although trite and common-place, are worthy of all attention whenever we are engaged in any enquiries relative to the nervous system, and more especially in our attempts to elucidate the etiology of those diseases which arise from disturbances of that system.

The truth of this must be apparent at the very threshold of our present discourse. Some of the anatomist-physicians of modern times have laboured to prove, that convulsions are always dependent upon an inflammatory, or at least a hyperemic condition of some part of the nervous system, and therefore, demand on all occasions an antiphlogistic treatment, wilfully shutting their eyes to the every day fact, that the disease often occurs in the feeblest and most exhausted subjects, who exhibit not one symptom of sanguineous excitement, or of plethora; that they frequently supervene on profuse hæmorrhages, and other discharges; that they are benefited by stimulants, and made worse by depletives, and that the very results of post mortem examinations, on which they wish to establish their creed, are often nugatory, and sometimes quite opposed.

The convulsions which occur in the puerperal (using that term to embrace the periods of gestation, labour, and the first week or two after delivery) state, exhibit a considerable variety in their obvious characters; sometimes they are allied to the phenomena of an hysterical or epileptic fit—at other times, they partake more of a tetanic or apoplectic diathesis; hence the practically useful divisions of the genus "eclampsia" into the four orders now enumerated. The convulsive movements may be either local, affecting one set of muscles, as those of the face, of one limb, &c. or general, when all the voluntary muscles, and sometimes, also, those which belong to the mixed and involuntary classes, are affected.

Partial convulsions are by no means of very frequent occurrence; unless indeed, we include under this term the obstinate vomitings which so distress some patients during gestation and labour—the violent palpitations, and other analogous symptoms. These phenomena, however, although no doubt partaking somewhat of the character of partial convulsions, are very properly excluded from the present enquiry, and demand for themselves a special consideration. The genuine partial convulsions may be either tonic or clonic; in other words, they may be either fixed, permanent, and, as it were, tetanic, or they may be rapidly recurring, with short intervals of repose, and accompanied with irregular and involuntary movements, more or less "bizarre." Not unfrequently (more especially during the first four months of pregnancy) the convulsive paroxysms are preceded by a sense of a ball, rising from the hypogastrium till it reaches the throat, well known to medical

men by the name of the "globus hystericus." Although not quite connected with our subject, we may state that this symptom sometimes occurs in male patients; two well characterized cases are detailed in M. Dubois' *Histoire Philosophique de l'Hysterie et de l'Hypochondrie*, 1833. The womb is, however, no doubt, almost always the "point de depart" of this curious phenomenon, which has given rise to many of the absurd delusions on record, such as women being possessed of the devil, and inwardly tormented and devoured by animals, which have been generated in their bellies, &c.

The abdominal muscles are sometimes the seat of partial convulsions. M. Dubois mentions the case of a young woman, six months pregnant, in whom the parietes of the abdomen contracted with so much violence, that the distended uterus was literally so squeezed fairly into the pelvic cavity, that it could not be felt for the time; and then it would bound forwards, like an elastic ball which has been struck against the ground. Other "bosselures" were seen in the epigastrium, umbilical region, and sides; they seemed to depend upon a spasmodic contraction of the viscera within, as well as of the abdominal parietes.

By far the most important of all the partial puerperal convulsions are those of the uterus itself—they may take place either during gestation, at the time of labour, or after the delivery of the child. M. Menard says that he has known the pregnant uterus assume during convulsions the shape of a calebash (a species of gourd); M. Baudelocque cites a case in which it rose, fell, moved to one side, then to another, with most surprising violence. M. Petit assures us that, in the case which he saw, the convulsions were so strong, that the uterus seemed at every moment to be forced down into the vagina, and that he was obliged to support it with his hand to prevent its protrusion; and M. Pacoud, in his "*Compte rendu de la Maternité de Bourg*," 1825, relates an example of the womb being affected with actual movements, and with a general violent agitation. The instances we have now recorded are, however, of very rare occurrence; and it is very generally only during the throes of labour, that the uterus is the seat of convulsive movements. The part most commonly affected is the inferior third of the body, and the cervix of the organ; and accoucheurs have remarked, that the period of labour at which the accident usually occurs, is when the head only of the infant has just escaped from the os uteri, while the rest of the body is still within. So strong is the spasmodic constriction, in some cases, that when attempts have been made to deliver with the forceps, the head has actually been torn away from the body; and Dr. Smellie alludes to a case, in which he was obliged to perforate the head and evacuate its contents, before delivery could be effected: M. Menard has related an example, in which the difficulty was still greater—the labour had continued for four days, the head had been torn away by the repeated traction, and even after this, the accoucheur experienced extreme difficulty in bringing down the arms; the upper portion of the cervix uteri was girt round the thorax like an iron brace; and it was only after repeated and fruitless efforts, that at length the hand could get hold of the feet to complete the delivery. The child proved to be ascitic.

Even after the birth of the child, the uterus may be affected with partial or general spasm; and, indeed, that species of retention of the placenta, which our Continental brethren designate "*le chatonnement*," is very com-

monly the effect of such a condition. It has been observed that, in such cases, the convulsive movements are usually limited to that part, beneath or nearer to the cervix than the contracted ring; sometimes, however, the upper portion is also involved, and the accoucheur is able to detect a trembling motion or "fremissement" of its anterior parietes.

It is not our intention to enlarge upon the subject of partial or local convulsions occurring in the puerperal state, as they are neither so common, nor nearly so alarming, as when they are more general, and affect the whole muscular system. We have already alluded to the variety of types or characters which the convulsions may assume, and to the division of the generic disease into four species or forms, viz. the hysterical, epileptic, tetanic, and apoplectic, to which some authors have added two others, viz. the cataleptic and choreic. What are the circumstances which induce or favour the occurrence of one or other of these forms, have hitherto not been satisfactorily examined. The constitution and temperament of the patient will necessarily have much influence; so, also, will the period of gestation and of labour, at which the attack supervenes; thus, it has been observed that the apoplectic eclampsia is not nearly so frequent before as it is during the act of accouchement, whereas the very reverse holds true of the hysterical form of the disease; and a similar remark may be made respecting the occurrence of partial and general convulsions—the former are more common before and after, than during labour. In order that we may the better be able to discriminate between the forms or species, it will be useful to keep in mind the most leading and essential features of the generic disease. The attack is very frequently preceded by certain premonitory symptoms, such as flushes of heat about the face, and throbbing of the temples, confusion of the ideas, rambling in the conversation, general restlessness and inquietude, &c.; but sometimes no warning is given, and the paroxysm is most sudden and unexpected: the whole body becomes at once agitated and convulsed—the limbs are bent, extended, twisted, and tossed about with fearful violence—the trunk is thrown spasmodically forwards, then backwards, then dashed from side to side—the features are distorted—every muscle of the face seems in motion, and the eyes roll frightfully about, or appear almost forced from their sockets, giving a most hideous aspect—the tongue is equally affected—a quantity of froth is spurted from the mouth, and the patient grins and gnashes her teeth with seeming horrid rage. The violent action of the diaphragm induces sobbing, and fits of apparent suffocation—the heart labours, and every artery of the body, but more especially the carotids and their branches, throb with prodigious strength, while at the same time the veins are gorged with their dark contents. The stomach, intestines, womb, and bladder all suffer from the general spasm; hence the violent vomitings, the involuntary discharge of the fæces, urine, and often even of the fetus itself. The duration of this truly frightful state may vary, from five minutes to half, or even a whole hour; and when it ceases, the patient may either become quite rational and quiet, or she may lapse into a comatose or syncopical torpor, which may continue for 12 or 24 hours before the return of consciousness and sensibility. In most cases there is a return of the paroxysm. Drs. Croft and Merriman make the important remark, that the return is often preceded by a remarkable slowness of the pulse, and M. Velpeau's experience confirms the accuracy of this test. When the patient recovers her consciousness, she

generally feels exhausted, as if beaten all over, nervously timid, easily alarmed; and she cannot believe the accounts of her attendants, if they are so imprudent as to tell her of what has taken place; even when the child has been expelled, she often seems quite ignorant of it, and can with difficulty be convinced that she has been delivered.

It occasionally happens that certain functions remain paralysed, or perverted, after the fit has ceased; in some cases the sight of one or of both eyes, the hearing, taste, or sense of smell is lost; at other times, the mind exhibits partial or general disturbance of its power.

Such is a rapid sketch of the leading features of puerperal eclampsia; and keeping this in view, as an epitome or portrait of the genus, our readers will be better enabled to appreciate and to compare the chief differences of the species comprehended under it.

1. *The Hysteric.* This form of the disease usually commences by involuntary sobbings, or sighing, by yawning and stretching of the limbs, by a sense of constriction in the throat, so that any efforts to swallow are painful and difficult, by great flatulence in the bowels, and often by a troublesome incontinence of urine.

The extensor muscles are generally more affected with spasm than their antagonists; hence the body is in most cases rigidly stretched back, the arms are repeatedly thrown forwards in front of the neck and chest, as if for the purpose of warding off an injury; but the muscles of the face are not so much distorted in this as in the other forms of the disease. The duration of the paroxysm is seldom long, and it terminates usually by an abundant flow of tears. The consciousness is almost invariably restored immediately after the cessation of the fit; and even although the patient may remain motionless, and does not answer questions, nor even seem to understand them, there is no distinct coma, the breathing being without stertor, and the pupils obedient to the action of light. The pulse is generally small and weak; in short, we may regard such a state as partaking more of the character of syncope than of comatose stupor. We have already remarked that the hysteric eclampsia is more frequent during the first four months of pregnancy than at any subsequent period; it is much less dangerous than the other forms of the disease, and rarely is so severe as to prevent the satisfactory and natural completion of gestation and of delivery.

2. *The Tetanic Eclampsia.* The Tonic contractions, in this species, seldom affect the whole of the body, but are usually confined, sometimes to one part, sometimes to another, commencing either in the jaw or in the limbs. The spasms, although certainly differing from what are called the common alternating, or clonic convulsive movements, exhibit distinct remissions:—During their continuance, the patient is ordinarily deprived of all consciousness, and she does not, therefore, experience the agonies of pain which are felt in tetanus, when it occurs idiopathically or after wounds.

3. *Epileptic Eclampsia.* This is the most frequent form of puerperal eclampsia, and to it is the description previously given chiefly applicable. The hysteric, choreic, or tetanic features may characterize the debut of the attack, or accompany and modify it in its progress; but very generally the

superadded symptoms of the distention of the face and neck, the cerebral congestion, the frothing at the mouth, and the irregular motions of the tongue and jaw, distinctly announce the prevailing type of the disease. After the fit has ceased the body remains pale; but still a degree of general puffiness and swelling is obvious; for example, if the patient is lying on her side, the lips are often observed to obey their mere weight, and hang down, as if all control over them was lost—hence the saliva keeps dribbling out continually. Although, however, the patient be quite unconscious, and lies in a state of stupor and insensibility, it would be wrong to consider this as actual coma; for her respiration may be calm, and void of all stertorous noise—if moved and addressed loudly, she may open her eyes, and utter some confused and indistinct answer, then relapse into her former apathy, either quietly, or in some degree peevishly, for having been disturbed. This condition of things may last for several hours, and then either give way gradually to returning sensibility, to be succeeded by another paroxysm of convulsions, without any interval of consciousness.

“Epilepsy, properly so called (says M. Velpeau,) differs from the epileptic eclampsia, not only as Mr. Burns affirms, in being dependent upon an organic lesion of the brain, whereas the latter arises from sympathetic irritation, and in being more or less regularly periodic in its returns, as Sauvages has pointed out, but also in its first attacks being always feeble, of short duration, and occurring only at long intervals—in the agitation being less general, the convulsions less multiplied and varied, and in the more speedy return of consciousness and sensibility.”

4. *The Apoplectic Eclampsia.* The adjective appellation of this form of the disease points out at once its distinguishing features—the oppression and stupor are more marked, the convulsions more heavy and embarrassed, the respiration stertorous, the pulse slower and fuller, and the pupils less obedient to light than in the other forms. The attack is also usually more gradual, being very often preceded by the signs of cerebral fulness. The muscular system is relaxed, and, as it were, dead—the eyelids, if separated, seem to fall together only by their weight; even the energies of the womb are greatly impaired, and hence the child is seldom expelled during the continuance of the disease. The periods at which the apoplectic eclampsia usually occur are, during labour, especially during its second stage, and also after the delivery. Instances are, however, recorded by Burns, Menard, and others, of its attacks in the early periods of pregnancy.

Under one or other of these four forms now enumerated, every case, perhaps, of puerperal convulsions may be satisfactory included. It is scarcely necessary to state that the disease is one of the most urgent danger; the most unfavourable symptoms are the repeated invasion of the paroxysm at short intervals, and the intervening coma being profound.

Denman has seen it prove fatal in 35 minutes from the first attack; and Schedel, Hamilton, Dewees furnish numerous examples of death, supervening in from 12 to 24 hours. One of the most frequent of the immediate causes of death is sanguineous effusion within the cranium. Rupture of the uterus is an occasional accident.

Even when the patient does recover, it is not uncommon that some distressing results are found to have been induced; thus different forms of insanity, of paralysis, &c. may be left behind.

Madame Lachapelle says that many women who have suffered from eclampsia become affected with inflammatory and congestive diseases; and she instances peritonitis, as one of the most frequent of such accidents. The pathological anatomy of puerperal convulsions is still very obscure. A small quantity of serosity may be found in the ventricles of the brain; its veins and sinuses may be engorged, its membranes and substance may be somewhat redder than is natural; but in numerous cases, even these unsatisfactory lesions, may be entirely absent, or only doubtfully existent.

The heart is sometimes found flaccid and empty; the lungs either congested or unusually pale; a few ounces of yellowish serum are sometimes contained within the thorax or abdomen;—such are the unsatisfactory appearances which Dr. Denman has detailed. Hewson, Hooper, and Ley, each records an example of encephalic sanguineous effusion. M. Cruveilhier, certainly one of the highest authorities on every subject connected with pathological anatomy, assures us, that very often he has not been able to discover a single appreciable lesion; and Mad. Lachapelle has formally announced, that if apoplexy be not coincident with puerperal convulsions, the post-mortem appearances are almost always quite insufficient for the explanation of the symptoms during life. The state of the spinal marrow has probably not been sufficiently often examined to authorise the assertion, that it is as little organically affected, as the brain. It would certainly be interesting to ascertain the condition of the hypogastric nerves, and of the lumbar portion, especially, of the cord.

So much for the pathology of puerperal convulsions. Our knowledge on this subject is exceedingly incomplete, and is to be regretted the more, as it is not improbable that, were it more accurate and precise, the therapeutic indications might be more obvious, and the treatment therefore more successful. Of all the remedies which have been used, blood-letting, copious and repeated, has been most universally confided in; but useful, and absolutely necessary though it may be, we have little doubt but that it has been practised far too indiscriminately and empirically, without regard to the specific characters, and varying circumstances of the cases. M. Velpeau is obliged to confess, that many of the most eminent French accoucheurs are comparatively very unsuccessful in their treatment of eclampsia; and that Mauriceau and Lachapelle, both of whom employ bleeding to a very large extent, lose at least one half of their patients, while Dr. Merriman, who is much more sparing in the use of the lancet, has asserted that he saves two-thirds of his. Far be it from us to condemn venæsection in most cases; it is very generally necessary, and often quite indispensable, for the salvation of our patient; all that we mean to insist upon is, that our practice should be founded on the scientific principle of studying each particular case, and of adapting our treatment to its special exigencies. One case may be benefited by a single bleeding, and aggravated by a second; while another case requires its repetition, perhaps half a dozen times in the course of 24 hours. As a general rule, we have no hesitation in asserting that bleeding is by far the most potent antispasmodic against puerperal convulsions, and that all the internal remedies which have acquired that title are often not only useless, but positively injurious, if exhibited before blood be withdrawn. The use of them, however, immediately after a copious venæsection, is often most highly successful; and none deserves our confidence so

well as camphor in large doses, combined with hyosciamus. The practice which we usually adopt is to give ten grains of camphor, with a drachm of the tincture of hyosciamus, in a little distilled water, every two or three hours; employing, at the same time, a stream of cold water on the shaved head, and applying mustard poultices to the thighs and to the pit of the stomach. Where the excitement is unusually violent, and the patient is of a full and plethoric temperament, we are in the habit of delaying the use of these remedies, (we mean camphor and henbane,) until the energies of the circulatory and nervous systems are brought down by free bleeding, and by the use of the tartar emetic, given in appropriate doses to produce a degree of nausea, or even of retching. One very great advantage obtained from inducing such a state is the general relaxation of every part, including the orifice and neck of the womb, which follows; hence the delivery, whether it be effected altogether by natural, or must be promoted by artificial means, is much more speedy and safe. When once the convulsions have been checked, or considerably reduced in frequency and force, a large dose of calomel, followed speedily by a powerful senna draught, should be given; for in this way, not only is a derivation from the head produced, but the stupifying effect of the antispasmodics is counteracted, and the expulsive action of the womb may be assisted at the same time. Our limits prevent us from any further details; it must be almost unnecessary to state, that in a large number of cases, we are obliged to accelerate the delivery of the child, either with the forceps, or by turning: and that in the event of the convulsions occurring before the period of labour, it becomes a question of high importance, whether we should induce premature labour. No medical man should undertake this last-mentioned operation, without the consent of another professional brother; but when the urgency of the case demands it, all fine-drawn scruples should be laid aside. Ere long, we have no doubt, the practice will be recognised by the French school, although hitherto it has been denounced as a foul and impious heresy. On this, as upon almost every other subject of medical practice, our neighbours are singularly fertile in their inventions; for, not satisfied with the hitherto adopted practice of gently opening the os uteri, and either rupturing the membranes, or separating them cautiously from their attachment to the cervix, they recommend "*le debridement du col*," or the notching of the cervix uteri with the scalpel, to facilitate its extension. Well might Mauriçeau say that the proposal "*ne pouvait etre que le fruit d'un instant de delire*." M. Velpeau seems nevertheless to approve of it; but his approval "*n'importe*;" for he has had no experience of its effects.

Although we have devoted a few pages to the consideration of the theme of our author's work, we have purposely omitted any frequent reference to its contents; for, like many of his other productions, it has been by far too hastily got up, and bears throughout too much the aspect of a mere thesis to stand the ordeal of a rigid criticism.

1. THE PATHOLOGY AND DIAGNOSIS OF DISEASES OF THE CHEST; ILLUSTRATED ESPECIALLY BY A RATIONAL EXPOSITION OF THEIR PHYSICAL SIGNS. WITH NEW RESEARCHES ON THE SOUNDS OF THE HEART. By *Charles B. Williams, M.D. &c.* Third Edition, much enlarged. Octavo, pp. 209, with two Plates and Tables.
2. APPENDIX TO THE SECOND EDITION OF A TREATISE ON THE DISEASES OF THE HEART AND GREAT VESSELS, &c. By *J. Hope, M.D. F.R.S.* Assistant Physician to St. George's Hospital, &c. 1835.*

It is gratifying to observe the steady progress in public estimation made by the study of the physical signs of the diseases of the chest. It is but a few, a very few years, since the advocates of auscultation were ridiculed in private and in public—in societies and journals. Those who laughed at the inutile lignum, were so blind as not to perceive their own absurd position, absurd, because they voluntarily closed the ears which Nature gave, against the sounds she uttered. They employed the nose, the eyes, perhaps the tongue,† because their forefathers had set them the example. But the same reason induced them to reject the sense of hearing—a happy thought, exactly similar to that of the celebrated sheep of Panurgus, who jumped in the sea because their leader fell in.

Such opposition, based on prejudice, and indefensible by reason and by common sense, could not possibly withstand the progress of knowledge. Such a mop could not dry up such an Atlantic. All public opposition, in fact, has ceased, and become so completely a matter of history as the equally wise, but more malignant attacks on Gallieo, or the loud and general clamour against Harvey.

There can be no question that the first pretensions of the auscultators, or of many of them, were extravagant. They affected a precision which is perfectly unattainable, and depended on auscultation for more than it can offer. Such enthusiasm was natural, and may be excused: but we fear that, even now, there are some who make the stethoscope an instrument of delusion, possibly to themselves, but certainly to their patients. Happily, such conscious or unconscious quackery is limited to a few, and those the least respectable members of the profession, and the better informed and better principled are earnest in exposing the indecent fraud.

Dr. Williams adopts that sober view of the value of the physical signs of disease of the thoracic organs, which all men of experience and honesty must sanction. We cordially agree with him in the scope and tenor of the following remarks, contained in the preface to the edition now before us.

* This Appendix arrived as we were completing the present article. The second edition of the work itself has not yet reached us.—Eds.

† It is not very long since the stools were tasted. The urine may occasionally be so still.

“Within the last few years (he says,) auscultation has been rapidly advanced in the estimation of the profession; and I think this is much to be ascribed to the more rational and moderate manner in which its pretensions have been urged. Instead of being blindly put forth as infallibly indicating such and such diseases, its signs are now appreciated only as they inform us of certain physical changes in the organs within the chest; whilst the aid of our other senses, a due attention to the general symptoms, and a careful reflection on all these evidences, are also required, to enlighten us in our study of disease, and to suggest remedies for its removal. It is with a view to prevent the student from relying too exclusively on the physical signs that I have in the present edition added a short summary of the general symptoms of each disease, which in very many instances are more important in guiding our practice, than the local signs.”

We were the first to impress on the profession of Great Britain the imperative necessity of cultivating an acquaintance with auscultation and percussion—we have since laboured sedulously, and probably not altogether unsuccessfully, in the field—yet we do not hesitate to admit that the estimate of our author is a just one, and to add our belief, that the mere auscultator is as dangerous a personage as could be placed in a sick room. We seldom pass a week without observing some pregnant illustration of the blunders of such gentlemen.

We are induced to notice this, a third edition, because it really contains new matter. That new matter is judiciously and specifically stated by the author, a piece of information equally valuable to the reader and the critic. The additions are actually as follow:—The sections *On the Ocular and Manual examination of the Chest*; *On Expectoration*; *On Encephaloid Disease, Melanosis, &c.*; *On Diseases of the Bronchial Glands*; and the whole of Part III., *On the Auscultation of the Heart*—are new; and large additions have been made to the sections on *Bronchitis*, *Peripneumony*, *Pleurisy*, *Pneumothorax* and *Phthisis*. This new matter will alone receive our notice, and to this we therefore proceed.

I. OCULAR AND MANUAL EXAMINATION OF THE CHEST.

To the general principles on which percussion and auscultation are founded, it would be almost impertinent to refer. Such principles, the A B C of science, we must now suppose familiar to our reader. Yet, if any be still unacquainted with them, we refer them to the various elementary works upon the subject, some of which all members of the profession should possess, and not only possess but diligently study. Yet the ocular and manual examination of the chest may be considered as a step preliminary to that of percussion or of auscultation. It is less exact than they are, but it offers data frequently important, and always useful.

In a well-formed and healthy chest, both sides should be equally raised and depressed in the act of respiration. That of inspiration is of a compound character—partly affected by the elevation of the ribs, partly by the contraction and descent of the diaphragm. If, then, the chest be unequally expanded—if one side rise more or less than the other—or if respiration be carried on exclusively by the ribs or diaphragm, it is obvious that there is a

deviation from the healthy condition of the thoracic apparatus, and the cause of that deviation must be sought. It may be such as to be obvious at once to the eye, or it may require the discriminating assistance of the touch. Let us then understand that the action of the chest presents two important physical deviations from the natural standard;—in the first, the respiration is too exclusively performed by the ribs, or too exclusively carried on by the diaphragm; in the second, there is inequality in the motion of the respective sides of the thorax. The indications derived from the former are the least valuable, and may be first disposed of.

“If any disorder,” says Dr. Williams, “impede the free descent of the diaphragm, whether it be pain of this muscle or its coverings, or of some of the viscera below, or whether it be pressure on its under surface, as from abdominal dropsy, tumors, or pregnancy, an increased task will then devolve on the ribs and their muscles, and the respiration being performed principally by the heaving of the chest, is called *thoracic*. This character of respiration is obvious to the eye: and one hand applied lightly, but, in close contact, on the chest, and the other on the abdomen, equally perceive it: it becomes then the next matter of inquiry, which of the above mentioned causes is present. Again, in the converse case, which belongs more closely to our subject, pain or increased sensibility of the parietes of the chest, or of its more superficial contents, ossification of the cartilages of the ribs, and occasionally certain changes in the lungs themselves, which will be afterwards considered, making the respiration *diaphragmatic* or *abdominal*, the ribs remaining comparatively immobile. The diseases of the chest which may render the respiration chiefly abdominal, are pleurodyne, inflammation of the costal and upper pulmonary pleura, and occasionally induration of the lung by hepatisation or tubercles. Of those which render the respiration chiefly thoracic, besides diaphragmatic pleurisy, spasmodic asthma may be reckoned, in which the diaphragm, overcome by the superior force of the bronchial muscles spasmodically contracted, is permanently drawn into the chest, causing a remarkable hollow at the scrobiculus cordis, whilst the respiration is carried on by the intercostal muscles, and others which assist them in supplemental respiratory efforts.” 13.

It is obvious that several and opposite causes conspire to render the respiration thoracic or abdominal. In the mental process of investigation, the physician, informed by the physical signs which of the two unnatural conditions exists, passes rapidly in review the causes of both, and proceeds to determine by the analytical examination of other symptoms, which of those causes is the true one. And this it is which constitutes the value of any general symbol of disease. It circumscribes and directs inquiry.

By the way, the rigid critic might reasonably take exception against the bold assumption of our author, in reference to the pathology of spasmodic asthma. We are not sure, even though Dr. Williams be so, that in that complaint the “bronchial muscles” exert a force superior to the diaphragm, and forcibly draw it into the thorax. This is, at the best, a pretty piece of theory, and in a work devoted to the most precise and demonstrable division of symptomatology, the less of theory, perhaps, the better.

A difference of action in the two sides of the chest furnishes very important indications. The want of correspondence may be in form or motion, or indeed both. As both lungs are seldom affected at the same time, except in phthisis, a sign which at once and obviously determines something unnatural in one, must evidently be valuable to the surgeon or physician.

Any disease, as our author observes, which interferes with the respiratory act, and affecting chiefly one side, will produce an inequality obvious to sight and feeling. For this mode of examination, the patient should be placed with his chest exposed in a good light opposite to the observer, who attentively surveys the chest, and further corrects his estimate of its form and motions, by feeling with his two hands the simultaneous motions of corresponding parts on the two sides, during increased as well as ordinary acts of respiration. To determine the comparative size of the two sides of the chest, the more accurate method of measurement from the spinous process of a vertebra to the sternum may be sometimes employed. Care must be taken that the string or tape be passed over corresponding parts; and it must be held in recollection, that in healthy persons the right side is almost always slightly larger than the left.

"Now," continues Dr. Williams, "it is obvious that any inequality or irregularity in the form or movement of the chest will imply some disease; and, with a little further attention, the same method of examination will give some general knowledge of its seat and character. Thus, if one side appears to be immobile, with a sharp pain or stitch, but without alteration of size, it may be suspected that a pleurodyne or a recent pleurisy is the disease, and prevents the respiratory movements by the pain which it would cause in the affected part. If to the immobility of the side is joined an unnatural fulness, perceptible to the eye and to mensuration, there is perhaps effusion into the pleura, as in advanced states of pleurisy, empyema, hydrothorax, and pneumothorax. If a contraction of the side is joined to the defect of movement, adhesions or the reabsorption of a pleuritic effusion of some standing, is the probable cause. If one side does not partake in the respiratory act, and yet there is neither pain nor alteration of size, it is likely that the corresponding lungs may be hepatised, or otherwise obstructed.

The preceding signs are connected principally with the middle and lower parts of the chest. Irregularities in the movements and shape of the upper regions are perhaps more characteristic. Thus tubercular disease rarely exists to a considerable extent without diminishing the motion of the upper ribs of the affected side; and adhering, as the diseased lung often is, to the walls of the chest, it not unfrequently causes an angularity and want of symmetry, which are very characteristic. Opposed to this is the effect of pulmonary emphysema, which gives a full and unnaturally rounded appearance to the upper parts of the chest, whilst, both by sight and tact, it can be perceived that the chest does not rise and fall to its natural capacity." 15.

Dr. Williams remarks, and properly remarks, that the preceding signs are too vague and indecisive to do more than lead the way to accurate discrimination. Yet they serve as sign-posts, and though they may not take us to our journey's end, they tell us the shortest and the safest road to it. There is another advantage in attending to signs of this description. They induce a habit of minute and accurate investigation, a habit which is often productive of the most important consequences. The surgeon who is conversant with percussion and with auscultation, will frequently detect a tumor or an aneurism, which others have omitted to observe, because they have omitted to examine.

The exploration of the condition of the intercostal spaces by the fingers is occasionally productive of advantage. The pulsations of the heart and of aneurismal tumors may be thus distinguished. We have found this kind

of examination of service in cases of acute pleural inflammation. When this exists, the tenderness on pressure of the intercostal spaces is occasionally great, and this is at times a valuable indication.

Of course, in practising ocular and manual examination of the chest, the physician must not commit the blunder of mistaking for disease actually in progress, those deformities produced by curvature of the spine, or by improper nursing. The effects of tight lacing in females becomes also obvious to the eye, in the permanently contracted and less mobile state of the lower parts of chest, and in the increased heaving of the upper ribs.

Such is the section on that preliminary examination of the chest which should always, if possible, precede any more minute investigations.

ON EXPECTORATION.

There are two ways of studying disease. The first and best is the analytical—that by which we unravel symptoms, and trace them back to the physical lesions by which they are occasioned. This is the philosophical method, and this is the very basis of all sound and satisfactory medical science. But it is frequently advantageous to neglect this exact and laborious train of reasoning, and to erect for the occasion particular symptoms into substantive diseases. The patient, for instance, has pain in the back. The philosophic surgeon investigates the nature of the accompanying phenomena, and endeavours to determine on what that pain may really depend. Effecting this, he directs his attention and his remedies to the cause and not to the mere consequence, and this is the aim and the triumph of science. But the proceeding may be usefully reversed, usefully by him who is conversant with the better and the nobler mode of study. He may look on pain of the back, per se, as a morbid state, generalize the circumstances under which it occurs, arrange the various conditions that produce it, and determine the remedies most calculated to relieve it. It is the combination of the knowledge derived from both these sources, that constitutes the accomplished practitioner.

These remarks were occasioned and may perhaps appear borne out by the short section on a symptom of disease of the thoracic organs—expectoration. That this must be a symptom of many and of very various conditions we need hardly say. Yet even as a symptom it assumes importance, from the states it represents, and the treatment it requires. Let us hear what Dr. Williams has to say upon the subject. He first considers physiologically the act, and then pathologically the matter of expectoration.

“The act,” says he, “of expectoration is one of the instances of combined movement in the respiratory machine, which by an admirable and harmonious consent between its numerous muscles, unerringly produces such a variety of actions. The function of respiration is of such vital importance, that accumulations or effusions that obstruct it, endanger life itself. The structure of the bronchial tree contributes greatly to the easy removal of any superfluous matter in it that might cause such obstruction, for the sum of the area of its branches being considerably greater than that of its trunk, the trachea, the air commonly finds easy entrance into the air cells, and on its more rapid return in expiration, carries with it the superfluous matter. Thus ordinary respiration

tends to prevent, in spite of gravitation, any accumulation in the air tubes ; but the excretion is more completely effected by coughing, and special efforts of expectoration. These consist of a quick and forcible expiration, preceded by a deep inspiration, and accompanied with constriction of the larynx and trachea, the effect of which is to bring any superfluous matter into positions, from which the air, forcibly expired, drives it through the glottis. It is worthy of remark that expectoration cannot effectually take place without a previous full inspiration by which air is carried beyond the accumulating matter ; hence, when this is prevented, either by weakness of the respiratory powers, or by the impermeability of the bronchial tubes, the excretion is suppressed. The first of these causes of obstructed respiration is exemplified in adynamic fevers, which may thus prove fatal ; the second occurs in pneumonia, in the stage of hepatisation, and if extensive, must lead to a fatal obstruction of the respiratory function. They probably occur together towards the fatal termination of bronchitis, phthisis, and other severe diseases of the lungs." 45.

The matter expectorated is surely deserving of serious attention, exhibiting as a secretion the state of the discerning parts. Dr. Williams laments, and not without some justice, the imperfect information too often evinced by practitioners on this point. We have often seen the genuine tuberculous expectoration considered as of little moment—and, commonly, the presence of pus in the expectoration is deemed a sure proof of the lungs being "diseased." Dr. W. too, remarks, that the pathognomonic sputa of peripneumony, and the well-marked secretion of acute bronchitis are hardly recognized, indeed commonly mistaken. All Dr. Williams has to say is soon said.

"The natural secretion of the bronchial mucous membrane is a colourless liquid of somewhat glutinous quality, like a thin solution of gum arabic. It does not much differ in composition from the serum of the blood, and owes its viscosity to an animal substance, which Dr. Pearson, Dr. Bostock, and Berzelius, concur in considering an imperfectly coagulated albumen. This secretion is the basis of most of the varieties of expectorated matter ; but unhappily our present knowledge of animal chemistry does not enable us to discover the precise nature of the changes in composition which produce these varieties. All that we learn is, that albumen in different forms and proportions is present ; for whether the expectoration be mucus, serum, pus, tuberculous matter, or coagulable lymph, the chemist can discover in these but scarcely discernible varieties of the same principle. There is a considerable variation in the proportion of saline matter in different kinds of expectoration ; and on this depends a distinction formerly much insisted on, by means of the salt or sweet taste. This criterion certainly fails to distinguish pus from mucus ; but I think that an excess of saline matter may be taken as a sign of inflammatory action in the mucous membrane.

It is by its mechanical and visible conditions, however, that expectorated matter is most distinctly characterized ; and to examine these fairly, the entire sputa should be collected in one or more convenient vessels of white ware or glass, in which their quantity, colour, and consistence, can be minutely scrutinized." 46.

We think it would have been well if our author had dwelt a little more at large on the varieties of the expectoration. He has enumerated wants but not supplied them—a tantalizing process.

ENCEPHALOID DISEASE—MELANOSIS, &c. OF THE LUNGS.

Dr. Williams offers little on these diseases to detain us. He states that melanosis, encephaloid, or medullary sarcoma, fungus hæmatodes, and scirrhus, are occasionally developed in the pulmonary tissue; and they may occur in a circumscribed form, or diffused through a considerable extent of texture. They would then produce the same physical signs as tuberculous disease of analogous extent, and could be distinguished from this only by the general symptoms, and the absence of the constitutional indications of tubercle.

"These diseases," he proceeds, "usually prove fatal, either by encroachment on the function of the lungs, or from being simultaneously developed in other organs (especially in the liver) before the process of softening and ulceration can be effected. To this, nevertheless, they certainly tend; for I have seen instances, and others are on record, of ulcerous cavities formed in melanose and encephaloid solidifications of the lung; and the expectoration, in one case of a black and red, and in the other of a streaky whitish and sanguinolent purilaginous matter, led to a suspicion of the nature of the diseases, before death. In such cases the stethoscope would indicate the gurgling and other signs of a cavern in the lung.

The general signs of these affections are more commonly those of obstructed circulation, dropsy, &c., with oppressed breathing, than those of emaciation, common in tuberculous disease. The difference in the duration and progress of these several morbid productions sufficiently explain the variety in the symptoms; and I am disposed to think that these differences proceed in great measure from the mechanical condition and degree of vitality in which these matters are deposited from the blood, as I have endeavoured to point out analogous circumstances in the nature and changes of tubercle." 154.

We do not see any thing in Dr. Williams's brief observations on the structure of encephaloid disease, or of melanosis, that need occupy our attention. We may mention, *par parenthèse*, an instance of complete conversion of one lung into encephaloid disease which we witnessed some years ago at St. George's Hospital. There was measurable contraction of one side of the chest, and this was thought to be the consequence of former pleurisy. But the patient became hectic, had symptoms which resembled phthisis, and died. On dissection the disease was such as we have mentioned.

With our author's observations on the black matter found in the lungs of the older inhabitants of large towns, we leave the present section.

"The black matter which is found in the lungs of the older inhabitants of large towns, is a carbonaceous matter, and beyond doubt is derived from the soot inhaled in the air, as first supposed by Dr. Pearson. Its deposition and permanency in the tissue of the lungs, is a proof, not (as Majendie maintained in the analogous case of the carbonaceous matter of tattooed skins, and of the insoluble oxide in persons coloured by the internal use of nitrate of silver) that there are no textural reparation and absorption, but that this absorption cannot act on insoluble solid matter. I believe that this black matter finds access to the pulmonary texture principally through abrasions, softenings, or other lesions of the bronchial mucous membrane, slight injuries of this kind being common accompaniments of an ordinary cold or cough. This coaly dust does not appear generally to produce any injury to the function of the lung, but getting into any corners out of the immediate sweep of the circulation, such as in the angles of

the lobules, or the sides of large vessels, in cicatrices of old lesions, and in the bronchial glands, it remains slowly accumulating until death, or until it is carried off in expectoration, by some pulmonary disease. But there are some curious instances on record, in which this accumulation has taken place so rapidly and extensively as to infringe on the function of the lung, producing œdema and a black consolidation of the tissue, which tends to ulceration and the formation of cavities. A case has been described by my lamented friend, Dr. J. E. Gregory,* in which the habitual inhalation of the dust of a coal mine had produced a disease of this kind, accompanied with the cachectic anasarca state consequent on the obstruction to the pulmonary function. Other cases are related by Dr. W. Thomson,† in which a similar affection could be traced to continued employment by the light of lamps which give out much sooty smoke. In these instances an additional cause of pulmonary disease seems to be required to produce the black infiltration in the manner which I have mentioned; and this cause was presented either in prior bronchial complaints, or in the occupation of the individuals as stonemasons, which of itself frequently produces severe lesions of the bronchial membrane, and even of the pulmonary tissue. In Dr. Gregory's case the coal dust was the mechanical irritant as well as the colouring matter." 156.

DISEASES OF THE BRONCHIAL GLANDS.

Dr. Williams has not much to offer upon this head. The bronchial glands are occasionally enlarged from inflammatory action, and Laennec in a few cases, found them the seat of abscess. They are frequently the seat of tuberculous deposit, which Dr. Williams has seen exclusively affect them. When thus tuberculous, they sometimes attain the size of a pullet's egg, and by pressure on the trachea or bronchi, or on the blood-vessels, induce dyspnoea and obstructed circulation. Dr. Carswell considers this to be not uncommon in children; and he would ascribe to it the dyspnoea occurring in them, without signs of other disease, when the chest continues to be sonorous on percussion, and the respiration every where audible though weak. Tuberculous matter in the bronchial glands is liable to the softening, and to the drying and cretaceous conversion which affect this deposit in the lungs. The softened matter may be evacuated through the bronchi, leaving a fistulous cavity; and Guersent describes this as not an uncommon case in children. Dr. Carswell notices an instance of a child, in which this softening and ulceration proved fatal, by opening a branch of the pulmonary artery. But sometimes calcareous matter in the bronchial glands would seem to be formed independently of any previous tuberculous alteration.

Encephaloid disease may originate in these glands, and extend from them to the lungs.

Of the physical signs of alterations in the bronchial glands we think we may safely be excused from speaking. They are too vague to require notice, or, in practice, to deserve attention.

* Edinb. Med. and Surg. Journal, No. 109.

† In a paper read to the Medical Section of the British Association, Edinburgh, 1834. See also a paper by Mr. Graham of Glasgow, on Charcoal in the Lungs.—*Edinb. Med. and Surg. Journal*, No. 121.

We may now proceed to the part of this edition which is most deserving of consideration. It is that which is devoted to the auscultation of the heart. Our readers must be aware that many experiments have been lately made in order to determine, if that be possible, the characters and causes of the sounds which accompany the action of the heart. The experimenters have been, perhaps, as numerous as the experiments, and the conclusions have been almost as various as the experimenters. Yet this is an inducement to the man of ingenuity and perseverance, to endeavour to disentangle the knot, which would seem to have baffled so many attempts at its untying.

AUSCULTATION OF THE HEART.

We are induced to devote some little space to this interesting subject, because the diseases of the heart, though frequent, are occasionally obscure, and not uncommonly mistaken: and because, though much is yet uncertain, something would seem to be determined. For, as Dr. Williams judiciously observes, it may be useful to separate and appreciate the points that really are certain and useful, from those that are doubtful or ill-defined, both with a view to make our present knowledge safely available to the student, and to guide future inquirers in further investigations. Dr. Williams pays a well-merited tribute to the labours of Dr. Hope, a gentleman whose industry and talents must eventually confer on him a high degree of professional eminence.

In order to enable the majority of our readers to comprehend the nature and the scope of the experiments to which we shall presently advert, and the conclusions which might seem to be fairly drawn from them, we must venture to state as succinctly as possible the sound produced by the heart in health, and heard on applying the ear to the chest. We think we cannot do this better than in the words of Dr. Williams. We shall therefore introduce them here.

“On applying the ear to the region of the heart in a healthy person, a sound is heard at each pulsation, followed by an interval of silence. This sound is double; consisting of a dull, slow sound, immediately followed by a short quick one. The second or short one accompanies the ventricular diastole. Laennec rates the relative duration of these, in each ordinary pulsation, to be as follows: the first sound, two-fourths; the second sound, one-fourth, or a little more: the interval of silence, one-fourth, or a little less. These sounds are naturally most distinct in the space between the cartilages of the fourth and seventh ribs of the left side, and on the lower part of the sternum; the former part corresponding with the left, and the latter with the right side of the heart. Beyond this space the sounds are rarely distinct, in persons of good proportion and middling stoutness. In thin subjects, they are heard over the whole front of the chest, and sometimes reach to the left dorsal, and rarely to the right dorsal regions. I have very commonly found them audible through the vertebræ between the scapulæ.

Simultaneously with the first, or systolic sound, an impulse or shock is communicated to the stethoscope. It is most perceptible at and between the cartilages of the fifth and sixth ribs, where it may be felt by the hand; but the stethoscope commonly renders it sensible in lean persons over the whole præcordia, and if the sternum is short, in the epigastrium also.” 161.

Thus, then, there are two sounds heard, and one impulse felt. Of the two sounds, the first is duller and of longer duration—the second clearer and of shorter duration. The impulse is simultaneous with the first sound, and that and the impulse are synchronous with the arterial pulse. These are facts which scarcely admit of dispute or doubt, though both, indeed, have been raised on them, demonstrative as they appear. But nothing can exceed the confusion that prevails with respect to the explanation of them. The second of the chapters in the present work, devoted to the auscultation of the heart, contains an inquiry into the nature of the motions and sounds of that organ, and displays, in a striking manner, the variety of hypotheses advanced, refuted, and re-advanced upon the subject. To this inquiry we shall devote some space; for our information is acquiring a degree of distinctness and precision, and it may be useful to point out in the pages of this Journal what is true, what is false, and what is still uncertain.

In order to render this article an useful one, it will be necessary to enter at some length into particulars—to review what has been done—to shew what still remains for us to do—to exhibit the various opinions that have been advanced—to display the fallacy of those which are fallacious—and to endeavour, as far as a periodical writer can, to prevent future experimenters and inquirers from going unnecessarily over the same ground, re-discovering the same truths, or re-inventing the same errors. We are necessarily compelled to indulge in extract rather than analysis on this occasion; for Dr. Williams has already composed an abbreviated summary of former facts, and the details of experiments and their results are scarcely susceptible of advantageous condensation.

First, then, we will enumerate, in Dr. Williams's words, the hypotheses that have distracted the stethoscopic world—and add the objections, reasonable or conclusive, that may be severally urged against them. The views (and, if the list is not absolutely perfect, it is sufficiently complete) are, *seriatim*, as follows:—

“1. M. Laennec *a.* 1st sound, impulse, and pulse, caused by the ventricular systole. *b.* 2nd sound by the systole of the auricles.—*Remarks.* *a.* Generally admitted, and proved by various facts and experiments. *b.* Disproved by the fact noticed by Harvey and Haller, and confirmed by modern experiments, that the auricular contraction immediately precedes that of the ventricles: also by this fact, that both sounds sometimes continue after the auricles have ceased to contract.*

2. Mr. Turner.† 2nd sound produced by the falling back of the heart on the pericardium after the systole of the ventricles.—*Remark.* Disproved by the fact, that the sound continues when the heart pulsates out of the pericardium.

3. Dr. Corrigan.‡ *a.* Impulse and first sound caused by the rush of blood into the ventricles during the auricular systole. *b.* 2nd sound by the ventricular systole, which he considers to be instantaneous.—*Remarks.* *a.* Disproved by the clearly ascertained facts, that the 1st sound and impulse accompany the systole of the ventricles when the auricles have ceased to contract. *b.* Disproved clearly in large animals by the ventricular systole (which is not instantaneous,)

* Dr. Hope's Experiments on Asses. See his Work, p. 36.

† Med.-Chir. Trans. Edin. vol. iii.

‡ Trans. of King's and Queen's Coll. of Phys. Ireland.

and the pulse of arteries near the heart, evidently preceding the 2nd sound;* and further disproved by several pathological phenomena.

4. Dr. David Williams.† 2nd sound caused by the flapping open of the auriculo-ventricular valves against the sides of the ventricles; these valves he supposes to be opened by the *musculi papillares*.—*Remark*. This is contrary to the received opinion of anatomists with respect to the functions of the auricular valves and *musculi papillares*, and there is no collateral argument to maintain so gratuitous an assumption.

5. M. Pigeaux.‡ *a*. 1st sound produced by the blood rushing into the ventricles at the moment of their distole. *b*. 2nd sound by the collision of the blood against the walls of the aorta and pulmonary artery. *c*. The ventricles contract in a moment of silence before the 2d sound. *d*. The intensity of the sounds proportioned to the force by which the blood is impelled.—*Remarks*. *a*. Opposed by the facts stated against 3 *a*; opposed also by many pathological facts, such as the occurrence of a murmur with the 1st sound, in case of diseased semilunar valves. *b*. Disproved by the fact, that the 2nd sound occurs distinctly after the pulse in the carotids, and therefore after that in the larger arteries. *c*. Opposed by the observation, that the 1st sound and ventricular systole occur together and correspond in duration. *d*. This is opposed by the morbid phenomena of dilatation of the ventricles, which always increases the first sound, and of hypertrophy, which diminishes both sounds.

6. M. Majendie.§ 1st sound and 1st impulse produced by the ventricular systole impelling the apex with a shock against the walls of the chest between the fifth and sixth ribs; the 2nd sound and 2nd impulse by the blood, in refilling the ventricles at their distole, forcing their parietes with a shock against the sternum.—*Remark*. Completely disproved by the fact, that both sounds continue when the heart does not touch the parietes of the chest.¶

7. M. Rouanet.¶ *a*. 1st sound caused by the closing of the mitral and tricuspid valves against the auriculo-ventricular orifices during the ventricular systole. *b*. 2nd sound by the re-action of the blood in the arteries on the semilunar valves at the moment of the ventricular diastole.

8. Mr. H. Carlile.** *a*. 1st sound produced by the rush of blood into the arteries during the ventricular systole. *b*. 2nd sound by the re-action on the semilunar valves, as stated in *b* 7.

9. Dr. Hope. *a*. 1st sound and impulse, caused by the ventricular systole. *b*. 2nd sound and *back stroke*, or 2nd impulse, by the ventricular diastole. The natural as well as morbid sounds produced by the motions of the contained fluid." 165.

In order to proceed with any thing like clearness, we must now revert to

* Dr. Hope's Experiments, p. 31 of his work; and those of Mr. Carlile, Dublin Journal of Medical Science, vol. iv.

† Edinb. Med. and Surg. Journal, Oct. 1829.

‡ Arch. Générales de Médecine, Juillet et November, 1832.

§ In Lectures delivered at the College of France, in 1834, reported in the Lancet, Feb. 1835.

¶ See the Experiments of Dr. Hope (p 30 *et seq.* of his work,) of Bouillaud (Journ. Hebdom.) and my own, as described further on in the text. Many other facts might be stated as conclusive against this "last new view," but the above-named one seems to me quite sufficient.

¶ Journ. Hebdom. No. 97; also Mr. Bryan, Lancet, September 1813, and M. Bouillaud, Journ. Hebdomad. 1834.

** Dublin Journal of Medical Science, vol. iv. The essay was likewise read at the Cambridge Meeting of the British Association.

the experiments performed by Dr. Hope, and detailed in his work on the Diseases of the Heart. We must content ourselves with stating the most important and most obvious deductions drawn from the experiments in question. For the details of the experiments themselves we must refer to the excellent work of Dr. Hope. It may be considered, then, as demonstrated :

1st. That the auricles contract first, producing no sound.

2nd. That the auricular contraction is immediately followed by the ventricular systole, which is accompanied by the first or dull sound. This systole, by straightening the anterior convexity of the ventricles, brings their apex into forcible contact with the ribs, and then is produced the impulse. This systole, by throwing an additional quantity of blood into the arteries, causes the arterial pulse, which in arteries near the heart is synchronous with the ventricular systole, but in those more distant succeeds at an interval occupied by the transmission of the wave through the blood along the elastic tubes from the heart.

3rd. That the ventricular systole is immediately followed by the diastole, which is accompanied by the 2nd or short sound.

4th. That there is then an interval of rest, at the conclusion of which the auricles contract, and the series of motions is repeated as before.

These are facts. The concurrence of the first sound, impulse, and arterial pulse with the ventricular systole; and the absence of all appreciable sound on the contraction of the auricles are plain, obvious, undeniable facts, which all with eyes and ears may see and hear, in experiments on large animals. At many of those experiments we have been present, and for what has been stated we can personally vouch. The second sound has clearly nothing to do with the auricle, and it *appears* to co-exist with the ventricular diastole. Yet, so far as our personal satisfaction and belief go, the production of the second sound is involved in much more obscurity than that of the first.

A little consideration would shew even the most inconsiderate reader, that the *immediate* cause of the sounds of the heart continues unexplained. The first sound is manifestly connected with the systole of the ventricles, and depends upon it. But how is it produced? Is it by the motion of the blood, or by the bruit musculaire, or by any other concurrent alteration of the arrangement of the heart or of its contents? Let us first look at the opinions that have been advanced with respect to the production of the first sound. We must again quote freely from our author.

“The following causes (he says) have been severally assigned as physically capable of generating the first sounds during the systole of the ventricles. 1. The collision of the particles of fluid in the ventricles (Dr. Hope, Dr. Spittal.) 2. The rush of blood into the great arteries (Mr. Carlile.) 3. The closing of the mitral and tricuspid valves (M. Rouanet, Mr. Bryan.) 4. The muscular contraction itself.

1. The first of these explanations is ingeniously proposed by Dr. Hope, but he advances no facts in direct proof of the hypothesis. In a number of experiments which I have made on the generation of sound, I have found liquids, of all bodies, the most difficult to excite to sonorous vibration; and although they readily transmit vibrations already produced in solids, it requires a combination of circumstances to make them originate sound. This is consistent with the explanation which I have given of the production of sound (p. 5 *et seq.*) for impulses which throw solids into sonorous vibrations, are expended in liquids in

causing a displacement of their particles. On making an experiment with a gum-elastic bottle, by filling it with water, and then forcibly compressing it under water by the end of the stethoscope (avoiding the use of the hand, for that produces its own muscular sound,) I have failed in producing any sound at all approaching to that of the heart's contraction. The blood yields readily to the contracting ventricle, and there being no obstacle to the escape of blood from it, further than the weight of the arterial column, which the normal action of the heart can quietly and steadily overcome, it passes into the arteries without vibration. But if there be an obstacle to the current of the blood from the ventricle, whether that obstacle be a narrowing or a projection in the orifice, the current will act on it just as the bow does on the string of a violin; a sound will be excited, and thus are produced valvular murmurs. Again, if instead of the orifices being narrowed, the heart contracts with unnatural briskness, expelling its contents with convulsive energy, the natural outlets then become relatively narrow, and are thrown into vibrations; this is the *rationale* of the bellows murmur which accompanies the jerking pulse of pericarditis and the irritation of inanition. But the difference of these sounds, and of the circumstances that excite them, from those of the normal action of the heart, makes me hesitate to refer the latter to the same principle; and the fact that the morbid are often superadded to the natural sounds, also inclines me to think that they have a distinct cause.

2. The second explanation of the first sound, the rush of blood into the larger arteries is perhaps less liable to the acoustic objection before urged, than the preceding opinion, for the blood has acquired an impulse when it enters the arteries, and if its course there is not free, it might readily produce a sound. But in their natural state, the arteries give passage to the blood as smoothly as the heart parts with it, and it would prove an imperfection in nature were it otherwise. Moreover, if this explanation were true, the larger arteries rather than the heart would be the principal seat of the sound; and the sound should be increased by an hypertrophied heart, with a strong pulse, and diminished by a dilated heart and a weak pulse; yet the reverse of these is presented in nature.

3. The closing of the auricular valves The principal objection to this as the only cause of the first sound, is, that it must be instantaneous, and confined to the first part of the ventricular systole, whereas we know that the first sound is prolonged during the whole period of this action.

4. Although Laennec referred the first sound to the systole of the ventricles, he did not attempt to define the physical cause of its production. In the former edition of this work, I ventured to class it among the muscular sounds which Dr. Wollaston* first noticed to occur in all cases of rapid muscular contraction. This sound may be exemplified by applying the fleshy part of the thumb to the stethoscope or naked ear, and bending and straightening the thumb. It is louder in muscles that are thin, and in a state of considerable tension; and it is remarkable that it does not cease with the apparent movement, but continues as long as the muscle remains contracted and tense; it then takes on an intermittent character, like the noise of the rolling of a carriage over rough pavement, whence Dr. Wollaston was led to infer that muscular action is not perfectly continued, but consists of a series of minute contractions and relaxations. A good example of it may be obtained on applying the stethoscope to the neck of a person who holds his head back towards the opposite side, and then throws the platysma myoides into contraction. It still appears to me, that the most simple and satisfactory way of accounting for the first or systolic sound of the heart, is to refer it to this class of sounds. Their physical production seems to depend on the sudden tightness or tension into which the fibres of muscles are

* Croonian Lecture, Phil. Trans. 1810.

thrown when they contract; and the self-acting power of these fibres constitutes them the motors as well as the subjects of sonorous vibrations. Here we have to remark the extreme facility with which the motions of solids produce sounds, compared with those of fluids; for it is almost impossible to touch, stretch, bend, or compress solids, without throwing them into sonorous vibrations. In this case, we have a series of cords or fibres brought by a zig-zag tension, into a state of rigidity capable of sonorous vibrations, and the impulses developing these vibrations are communicated by the oscillations of those contracting fibres themselves; these oscillations in a greatly magnified degree, are apparent in the quivering seen and felt in the muscles of a horse drawing with unusual effort. The varieties observed in the contractions of the heart seem to me to be perfectly explicable on this principle. The sound begins the moment the fibres arrive at a state of tightening or tension; it continues until the contraction is completed and the blood expelled from the ventricle, and ceases the instant of the diastole. To perceive more readily the effect of hypertrophy, and of dilatation, let us attend to the sounds produced by the tension of linen or canvass (for muscle is, mechanically speaking, equally a web of fibres,) and we shall find that in proportion as we thicken the substance, we obscure the sound which is produced on briskly stretching it; but when we use thin and simple webs, the sound becomes proportionally loud and clear. I shall not pursue the illustration of this explanation further, for I introduce it here only interrogatively, as deserving a place among other views, on the claims of which, future observation and experiment must decide. I must only remark, that M. Pigeaux is in error when he maintains that muscular sounds cannot be produced under water: I find them more distinct and free from adventitious sounds of the surface, and I have been able to imitate the sounds of the heart very exactly by muscular movements of the hand under water. I will conclude with the question, if the first sound of the heart is produced by another cause, what becomes of the muscular sound in this case of rapid muscular contraction?" 168.

So much for the theories of the immediate cause of the first sound. Prior to adverting to the experiments we shall speedily have to consider, we must state the two principal opinions which are entertained, in reference to the efficient cause of the second sound. They are, 1, The re-action of the arterial columns of blood against the semilunar valves. 2, The impulse of the blood from the auricles re-filling the ventricle at its diastole.

Such was the general state of the question, when the series of experiments we are now to notice were undertaken by Drs. Hope and Williams. When we commenced this article, we were not in possession of an Appendix just published by the former gentleman, in a second edition of his work on Diseases of the Heart.* That Appendix contains, as does Dr. Williams' book, the series of experiments in question. The account is substantially the same in the publications of both gentlemen. Having hitherto made use of that of Dr. Williams, we shall take from it also the particulars of the experiments, and add the conclusions drawn by each gentleman.

"Experiment 1.

About twenty grains of Woorara, moistened with water, having been inserted

* A Treatise on Disease of the Heart, &c. &c. By J. Hope, M.D. F.R.S. &c. Second Edition, with an Appendix of Experiments, corroborating the previous series, and elucidating the causes of the sounds. 1835.

in an incision in the haunch of a donkey two months old, the animal died in fifteen minutes. Artificial respiration was immediately established, and the chest being opened, the pericardium was slit down and the heart exposed. Its pulsations were regular and vigorous, the auricles contracting immediately before the ventricles. The double sound was distinctly isochronous with the systole and diastole of the ventricles. The following points were then observed and noted, after repeated examinations by several present.*

Observation 1. The 1st sound was equally audible on all parts of the ventricles.

Obs. 2. The 2nd sound was most distinct near the roots of the great arteries, being audible there in the weaker pulsations, when it could not be heard by the stethoscope applied to other parts of the ventricles.

Obs. 3. Pressure on the arterial roots by the fingers, or by the stethoscope, invariably stopped the 2nd sound. Slight pressure caused a whizzing, or bellows murmur, with the 1st sound.

Obs. 4. On pushing the auricles, by the end of a finger, into each auriculo-ventricular opening, the ventricular contractions became weak and irregular; but the 1st sound although weak, was still heard alone.

Obs. 5. At each systole, the sudden tension or tightening of the ventricles was felt by the finger applied to their body, as an abrupt shock, with which the 1st sound exactly coincided.†

Obs. 6. The left auricle was cut open, and the mitral valve partially destroyed; the blood issued in jets at each ventricular systole; yet the 1st sound still accompanied the systole. The 2nd sound was not heard after this incision.‡

Obs. 7. The right auricle was also freely laid open; still the 1st sound continued.

Obs. 8. I pushed my finger through the mitral orifice into the left ventricle, and pressed on the right, so as to prevent the influx of blood into either ventricle; the ventricles continued to contract strongly (especially when irritated by the nail of the finger in the left,) and the 1st sound was still distinct, but not so clear as when the ventricles contracted on their blood.

Obs. 9. The same phenomena were observed when both the arteries were severed from the heart.

Until the auricles were cut open (as mentioned in 6 and 7,) the 2nd sound was audible in all the strong pulses of the heart, but it was not heard after, although upwards of 30 pulses, most of them vigorous, took place. Ten or twelve

* "The following gentlemen were present; and I here beg to offer to them, and to those who assisted at the other experiments, my thanks for their kind co-operation and testimony.—Dr. Arnott, Author of the Elements of Physics, &c.; Mr. Babington, Surgeon to St. George's Hospital, &c.; Mr. Good, Surgeon to St. George's and St. James's Dispensary; Dr. Hope, Assistant Physician to the St. George's Hospital, &c.; Mr. Henry Johnson, Demonstrator of Anatomy, &c.; Dr. J. Peregrine, House Surgeon at St. George's Hospital; Mr. G. Smith, Lecturer on Anatomy, &c.; Mr. Tatum, Lecturer on Anatomy, &c.

To Mr. Tatum, Mr. Henry Johnson, and Mr. H. James Johnson, I am especially obliged, not only for their able assistance, but also for the use of their splendid new dissecting-room, and its commodious appurtenances, in Kinnerton-street, where these experiments were performed."

† "This observation was, I think, suggested by Dr. Hope."

‡ "The results after 6 were witnessed by Dr. Hope, Mr. H. Johnson, and myself, the other gentlemen having left. The observations were noted during or immediately after the experiments; generally by Dr. Hope or myself."

strong contractions occurred after the introduction of the finger, as mentioned in Obs. 8.

This experiment lasted an hour and twenty minutes from the commencement of artificial respiration.

Experiment II.

About fifteen grains of Woorara (powdered, and made into a paste with water) were introduced into a wound under the haunch of a young ass, about six weeks old. The animal died in about thirty-five minutes. Artificial respiration was then immediately established, and the chest opened by cutting through the cartilages of the ribs, to the left of the sternum; and along the upper margin of one of the ribs near the shoulder, and then breaking back three or four ribs, so as to expose the contents of the left side of the chest. The following points were noted, as observed by several present.*

Obs. 1. Before the pericardium was opened, the 1st and 2nd sounds were very distinctly heard, although the heart touched no part of the parietes of the chest.

Obs. 2 Both sounds were distinctly heard through a lobe of the lung, interposed between the heart and the stethoscope.

Obs. 3. The pericardium being completely slit open, the 2nd sound was observed to be, decidedly, most distinct at the origin of the pulmonary artery and aorta, where it was louder than the 1st sound, and had perfectly its natural short, clear, flapping character. With the stethoscope applied on the body of the ventricles, the 2nd sound was heard less distinctly, and seemed more obtuse and distant.

Obs. 4. When the stethoscope was applied to the aorta about three inches from its origin, the 2nd sound (without the 1st) was heard following the systole of the ventricles as felt by the observer's finger.†

Obs. 5. The aorta and pulmonary artery being for a few seconds compressed between the finger and thumb, the 1st was accompanied with a bellows murmur, and the second sound ceased, during the continuance of the compression. This experiment was repeated several times by Dr. Hope and myself.

Obs. 6. A common dissecting-hook was passed into the pulmonary artery, and was made to draw back, and thus prevent the closure of the semilunar valves; the 2nd sound was evidently weakened, and a hissing murmur accompanied it. A shoemaker's curved awl was then passed into the aorta, so as to act in the same way on the aortic valves: *the 2nd sound now entirely ceased, and was replaced by a hissing.*

Obs. 7. The hook and the awl were withdrawn; *the 2nd sound returned, and the hissing ceased.* This and the preceding experiment were repeated, and observed by Dr. Hope, Mr. H. Johnson, Mr. Malton, and myself.

Obs. 8. Experiment 6 was repeated, with the same result, and whilst Dr. Hope listened, I withdrew the awl from the aorta. He immediately said, 'Now I hear the second sound.' I then removed the hook from the pulmonary artery; Dr. H. said, 'Now the second sound is stronger, and the murmur has ceased.'

Obs. 9. The pulmonary artery was cut open, and the finger introduced into the right ventricle;—the heart continued to contract irregularly, and the 1st sound alone was obscurely audible.

* Mr. Bushel, Lecturer on Anatomy, &c.; Mr. Good, Surgeon to St. George's Dispensary, &c.; Dr. Hope; Mr. H. Johnson, Surgeon, &c.; Mr. Keate, Surgeon to their Majesties, &c.; Dr. Macleod, Physician to St. George's Hospital, &c.; Dr. Page; Mr. Partridge, Junior Professor of Anatomy at King's College, &c.; Mr. Malton and Mr. Seagram, Pupils at St. George's Hospital; Mr. Wilesford, Surgeon, &c."

† "This observation was suggested by Mr. Keate, and Obs. 2, by Dr. Hope.

Obs. 10. Slight contractions took place after the ventricles were laid open, and the columnæ carneæ were seen to contract simultaneously with the fibres of the ventricles.

These observations lasted during an hour and ten minutes after the commencement of artificial respiration; and until the opening of the artery in Obs. 9, the contractions of the heart were generally regular and vigorous." 174.

Such are the experiments, and we will now add severally the conclusions of Dr. Williams and of Dr. Hope. We shall then have put our readers in possession of the whole of the present question, its bearings, and its merits. And first then let us present the sentiments of Dr. Hope—then those of Dr. Williams.

"These experiments," says the former gentleman, "appear to warrant the following conclusions:—

A. The first sound is loudest on the body of the ventricles (1.)

B. The second sound is loudest over the sigmoid valves, and thence for a few inches along the aorta (2, 12, 13.)

C. Preventing the reaction of the blood on the sigmoid valves, annihilates the second sound (3, 14.)

D. Creating regurgitation through the sigmoid valves occasions a murmur and extinguishes the second sound (15, 16, 17, 18.)

From the two last propositions it results that the closure of the sigmoid valves is the cause of the second sound.

E. The jerk (impulse) felt on the ventricles is coincident with and occasioned by the closure of the auriculo-ventricular valves, by which a sudden resistance is offered to the ventricular contraction (5): under these circumstances the first sound is perfectly loud and distinct (1, 10.)

F. When the resistance of the valves is removed, and the jerk thus prevented, the first sound is dull and obscure, (7, 8, 9, 19,) like the muscular sound which may be imitated with the hand.

The two last propositions seem to warrant the inference that the first sound is compound, viz. consisting, 1st, *possibly* of a degree of valvular sound, 2nd, of a loud, smart sound produced by the abstract act of sudden jerking extension of the muscular walls, in the same way that each sound is produced by similar extension of the leather of a pair of bellows—to avoid circumlocutions, I shall call this the *sound of extension*; 3rd, a prolongation, and possibly an augmentation, of this sound by the sonorous vibrations peculiar to muscular fibre (*bruit musculaire, muscular sound*.)

These heads will severally require a few remarks. The *valvular sound* can only be spoken of as *possible*, because being synchronous with, and as it were incorporated in, the sound of extension, its existence is not demonstrable. The *possibility* may perhaps amount to a *probability*, on the principle that, if the sigmoid valves can produce sound, the same may, by analogy, be predicated of the auriculo-ventricular valves.

The existence of the *sound of extension* appears to me to rest on strong grounds. The phenomena in No. 5 made a forcible impression on all present; and it was remarked that the sense of touch conveyed an identical idea with the sense of hearing. The first sound of the heart during palpitation is, in some instances, of such extraordinary intensity, that it would do violence to all analogy to suppose it produced solely by *bruit musculaire*; and some of the strongest advocates for this *bruit* have thought it necessary, in such cases, to imagine a sound produced extrinsically, by the heart impinging against the thoracic walls. This corroborates the opinion which I formerly expressed, (page 47,) founded upon, and subsequently confirmed by, every variety of experiment on muscular sound which I could devise. Nor can it be supposed, again, that the auriculo-ventri-

cular valves alone could produce so loud a first sound as is sometimes heard; not to say that this sound is of a different character, being much more blunt than the loudest valvular click, taking that of the sigmoides as a type.

The *bruit musculaire* appears to constitute the prolongation of the first sound, this prolongation being of the same dull, rumbling character, as ordinary muscular sound. Possibly it may add to the intensity of the first sound. Nor can it be affirmed that the motion of the blood does not also contribute to the sound, though there is no proof that it does. In the healthy human subject, when faint, the first sound is short and flapping, like the second. For this *bruit musculaire* alone would not account, as languor would increase the characteristic dulness and obscurity of the *bruit musculaire*. The first sound during faintness, therefore must proceed from muscular extension, or from the valves, or from both."—*Appendix vii.*

Dr. Williams's conclusions follow.

"The deductions," says Dr. W., "from these results are simple and obvious, and they not only decide between the views before stated, but they appear to me to demonstrate most satisfactorily the true seats and causes of the sounds of the heart.

That the first sound is not caused by the rush of blood into the great arteries, (as supposed by Mr. Carlile) is proved by Obs. 4, 6, 7, 8 and 9, of Exper. I.; and Obs. 9 of Exper. II.; in which the first sound continued, although little, and in the latter cases no blood could have been thrown into the arteries. A further proof against this view may be seen in Exper. II. Obs. 4, from which it appears that the first sound is much less audible in the large arteries than in the heart.

That the 1st sound is not dependent on the closing of the auriculo-ventricular valves, (as imagined by M. Rouanet and others) is evident from Exper. I. Obs. 4, 6, 7, 8, 9, in which the closure of these valves was partially or completely prevented, yet the 1st sound still continued.

That the 1st sound is not produced by the collision of the particles of fluid in the ventricles, (as formerly conceived by Dr. Hope,) appears from Obs. 4, 8, and 9, of Exper. I.; and Obs. 9 of Exper. II.; in which the sound was produced, although there was no blood in the ventricles.

That the first sound is produced by the muscular contraction itself, may be considered as proved by Obs. 8 and 9 of Exper. I.; in which every other possible source of sound was excluded, and the 1st sound still accompanied the systolic action of the ventricles.*

That the 2nd sound is produced by the reaction of the arterial columns of blood tightening the semilunar valves at the ventricular diastole, is clearly proved, not only by a situation of these valves being the special seat of the sound, (Exp. I. Obs. 2; and Exp. II. Obs. 3, 4) but also by the numerous observations in which the cessation or reproduction of the sound was effected by the suspension or restoration of the action of these valves. (Exp. I. Obs. 3; Exp. II. Obs. 5, 6, 7, 8.)

It being thus proved that the first sound is essentially produced by the tight-

*"This view of the cause of the 1st sound, was first published by me in the first edition of this work, in 1828, and I am not aware that it has been entertained by any other writer. M. Majendie is in error when he ascribes a similar opinion to Laennec, who, on the contrary, only associated the abnormal murmurs with the muscular sound produced by a fancied spasm of the heart and arteries; but neither in his works, nor in his lectures, did he give any opinion as to the physical causes of the healthy sounds of the heart."

ening of the muscular parietes of the ventricles, and the 2nd sound by the subsequent sudden tension of the semilunar valves, it is easy to perceive how various circumstances may increase or diminish the sounds, as they augment or impair the degree or abruptness of this tightening or tension in these parts. Thus the mass of blood in the heart increases the clearness of the 1st sound, by affording an object around which the fibres effectually tighten; whilst the auricular valves, by preventing the reflux of this blood, increase its resistance, and thus add to the tension necessary for its expulsion. Probably, in common pulsations, the ventricles do not attain the degree of tension which is sonorous until the closing of the auricular valves; this closure, as the commencement of the resistance, brings at once to its acmé the muscular tension, which continues until the contents of the ventricles are sufficiently expelled. This accounts for the sudden or flapping commencement often perceptible in the 1st sound, and it suggests how the due action of the auricular valves generally contributes to its clearness. The degree and abruptness of the systolic tension was well seen in Obs. 5, of Exp. I.; and the external feel and view of the systole gave us the impression of its being a motion in itself sufficient to produce sound.* The auricular valves, the cordæ tendineæ, the columnæ carneæ, and internal fibres of the ventricles, if they attain the same degree of tension as the exterior of the ventricles, may have an equal share in the production of the 1st sound; but I am disposed to think, that what we hear proceeds chiefly from the contracting tenseness of the external walls of the heart, both because they are nearer to the ear, and because in Exper. I. Obs. 8, the contraction of the left ventricle upon my finger within it, was by no means so abrupt or strong as that of the exterior as felt by the other hand, and still heard through the stethoscope.

The termination of the systole of the ventricles is abrupt, being immediately followed by the diastole: and it is obvious that the first effect of this must be, to occasion the sudden closing of the semilunar vales, pressed now only on their concave side by the force of the arterial column of blood. Hence the 2nd sound immediately succeeds the 1st, or rather appears to terminate it, by its abrupt, clear *flap*, which in the healthy heart differs as much in character from the 1st sound, as the simple valves by which it is produced differ from the thicker muscular web of the ventricles, the tightening of which causes the 1st sound. The mobile state of these valves, the bulk of blood propelled by the ventricular systole into the arterial column, and the suddenness of the diastole by which this column is brought to press fully backwards on the valves, are the circumstances which give clearness and loudness to the 2nd sound; and it may be seen, in the foregoing experimental observations, how various causes interfering with these, impaired or suspended the 2nd sound. Exp. I. Obs. 3, 4, 6, &c. Exp. II. Obs. 5, 6, 7, 8, 9." 178.

Such are the respective deductions drawn from the same experiments by the gentlemen before us. It remains for our readers to determine the degree of value, that they can attach to conclusions based upon premises of this description. There cannot be one rational doubt that the first sound and the impulse are immediately dependent on the ventricular contraction, and that they become, pathologically speaking, its gauge and measure. This is an important fact, enabling us, as it does, to determine by a plain and exact physical sign, the condition of the ventricle. And, as diseases of

* "The results of these experiments so completely confirm the views that I stated in the last edition of this work with respect to muscular action as a cause of sound, that I need here only refer to my former remarks as quoted in the note, p. 167."

the ventricles, especially the left, are perhaps the most frequent in the series of affections of the heart, we need scarcely point out the value of any symptom or sign which brings an addition of certainty to their diagnosis. Had auscultation done only this, it would still have conferred an essential benefit on medicine.

But what shall we say to the present investigations on the nature of the second sound? The experiments conducted by Dr. Hope and Dr. Williams, are certainly ingenious, and may seem satisfactory. They may seem satisfactory, but they are not demonstrative, and the amount of satisfaction must depend as much on the temper of mind with which they are regarded, as on their intrinsic exactness and freedom from liability to error. It may fairly be assumed in reference to experiments of this description, that the simpler and the less complicated they are made, the more likely they are to lead to determinate results. An acquaintance with the history of experimental physiology is not calculated to increase our stock of faith, nor to abate that scepticism which is Reason's shadow. Rational philosophical scepticism is friendly not inimical to truth; accelerates, and never can retard its progress. That scepticism in science we profess without shame, and we trust that it does not degenerate into prejudice.

These remarks may appear apologetic, and they are so—apologetic for the doubts we are about to hint with respect to the conclusiveness of the present investigations. Those doubts will be found to be essentially based on the principle to which we have already alluded—that the farther we depart from simplicity in experiments, the nearer we approach to fallacy in the results.

A glance at the pages over which we have travelled, with interest, if not with speed, will enable us to perceive that the following circumstances have led Dr. Hope and Dr. Williams to the conclusion that the second sound is occasioned by the closure of the sigmoid valves:—first, the second sound was more distinctly heard over the origins of the aorta and the pulmonary artery, than on the body of the ventricles; and, secondly, hooks passed into the pulmonary artery and the aorta, in such a way as to prevent the closure of the sigmoid valves, destroyed the second sound, and substituted for it a prolonged hissing, which hissing disappeared while the second sound returned, on removing the hook from the vessels in question. Such are the two facts which appear to establish the induction of our authors, that the second sound depends on the closure of the sigmoid valves. Let us see if any portion of fallacy can stick to them.

The anatomist is aware that the *origins* of the pulmonary artery and the aorta, and more particularly that of the latter, are concealed in the body of the ventricle. How nice then must that discrimination be, which, by the ear, amidst the bustle and confusion of an experiment, can determine with accuracy differences of sound dependent on differences of situation so minute. The aorta arises from the upper part of the left ventricle, the semilunar valves are situate precisely at its origin, a considerable portion of the substance, we may say, of the base of the ventricle intervenes between the cause of the sound (those valves) and the spot on which the stethoscope is placed, yet the latter distinguishes, or is considered to distinguish, the modifications of sound occasioned by *such* varieties of situation. We do not push this indirect objection farther than it ought fairly to be carried.

It does not overthrow the argument, but it certainly tends to render it unsatisfactory.

It may appear that the second is the stronger fact—that the total destruction of the sound, by prevention of the action of the semilunar valves, is conclusive with respect to the dependence of the one upon the other. Yet here again a rational scepticism finds room and necessity for doubt. In the first place, the experiments are not adequate in point of number to the proving of the induction, proving it, we mean, any thing approaching demonstration. In the second place, it may be questioned whether the semilunar valves were really prevented from acting by the introduction of a hook in the manner described by the experimenters. For, let any one endeavour to do this leisurely and with every facility that quiet and the absence of hurry can afford, on the heart of the dead animal; he will find that he cannot with certainty effect it. In the third place, there must necessarily be much violence inflicted, much disturbance produced, by attempts of this description—disturbance of a serious character when the object is to determine the causes of sound. If the action of the semilunar valves gives rise to a definite and audible sound, surely the passage of hooks into the great arteries, and rudely holding or tearing those valves, should occasion some acoustic phenomena, some physiological confusion.

Such are the doubts, the natural doubts, that a perusal of these papers creates in our minds. They are merely doubts, it is true, and possibly they may be shewn to be groundless and hypercritical. We shall feel great pleasure at finding that they are so; but we repeat that philosophical scepticism is absolutely indispensable if we wish to discover truth.

CLINIQUE MEDICALE, OU CHOIX D'OBSERVATIONS RECUEILLIES A L'HÔPITAL DE LA CHARITÉ. Par G. Andral, &c. Deuxieme Edition, revue, corrigée, et augmentée par l'Auteur. Tom. V. Maladies de l'Encephale. Londres, Delau, Soho Square.

[Second Article, continued from our last Number, p. 421.]

OUR author having considered in his first book, as we have seen, diseases affecting the membranes of the encephalon, now proceeds to the consideration of those which affect the substance of the brain itself, first commencing with cerebral congestions, or hyperemia.

Before we proceed to the analysis, we must beg leave to make one observation regarding the term hyperemia, as applied to the brain. When an organ is said to be in a state of hyperemia, it is meant that it contains more blood than ordinary; more than it contained in its normal condition. Now we conceive it physically impossible that any change should take place in the absolute quantity of blood circulating in the brain. We see this organ inclosed in an unyielding bony case, by which it is completely protected from the influence of atmospheric pressure, which we know influences the circulation in all other parts of the body, and in fact from all external in-

fluence save what is communicated through the blood-vessels which go to it. Owing, therefore, to this the physical condition of the brain, it may be safely asserted that, under ordinary circumstances, there can be no material change in the absolute quantity of blood circulating in it.

The further consideration of this matter would, we apprehend, lead us into that so much disputed, and, as we think, so much misunderstood, question, of the brain's compressibility. In using the term "misunderstood," we must however take care, and not be misunderstood ourselves, and thereby fall into the very error which we are about to deprecate. In saying that the question was misunderstood, we mean that the precise signification of its terms was not agreed on; that the abettors of the brain's compressibility, and those who deny it that property, did not attach precisely the same idea to the term, and were consequently speaking different languages. We have scarcely a doubt, that if both parties compared notes coolly and dispassionately, there would not be found between them that immense quantum discrepat now supposed. We have a no less authority with us than John Locke himself, when we assert that nothing has contributed more to retard the improvement of science and diffusion of knowledge, nothing has tended more to perpetuate disputes among men in all ages and all countries, than the improper use of terms. We shall now present our readers a few of the more interesting cases, and then proceed to the general deduction from them.

CASE I. Disease of the Heart of long standing—Sudden Loss of Consciousness and Motion—Speedy Death—Remarkable Injection of the Substance of the Cerebral Hemispheres.

A woman, 53 years of age, entered the hospital Cochin in the month of March, 1829, presenting the following state; face flushed; lips purple; œdema of the lower extremities; ascites; speech uttered with panting; orthopnœa; pulsations of the heart tumultuous, repelling the ear, perceptible in almost all the parts of the chest, except on the right posteriorly; pulse sunk, contrasting by the smallness of its beats with the strength of those of the heart, regular in other respects, and not frequent. Cough of long standing, dry sonorous râle in different points of the chest; digestive functions duly performed; no perceptible disturbance as far as regards the nervous centres. This woman was considered as affected with hypertrophy of the parietes of the heart with dilatation of the cavities; she was bled, and subjected to the use of digitalis.

Under this treatment, aided by suitable regimen and rest, the dyspnœa and ascites had diminished a little, when one day, on getting up out of bed, she complained of seeing every thing turn round her; she scarcely uttered these words, when she uttered a loud scream, put her hand towards her head, and fell down deprived of consciousness, which she did not recover during the remainder of the day, and died that night.

Post-mortem.—Cranium. The arachnoid of the convexity remarkably dry. The grey substance of the circumvolutions has a well-marked rose coloured tint. The medullary substance, which forms in a great measure the nervous mass situated over the ventricles, is traversed by a very great number of red points, each of which constitutes the orifice of a vessel gorged with blood. The ventricles contain very little serum. The optic thalami

and corpora striata less injected than the rest of the hemispheres. The sinuses of the dura mater were gorged with liquid black blood. *Thorax.* The lungs were infarcted with an enormous quantity of frothy serum, which flows out in great quantity at every incision made in their parenchyma. Heart very large; its parietes thickened, and its cavities dilated. Its different orifices free; at the base of one of the aortic valves are some slight ossifications, which present no obstruction to the freedom of its action. The aorta presented no other lesion than some cartilaginous and bony patches incrusting its parietes. *Abdomen.* Slate-coloured tint and enlargement of the papillæ of the gastric mucous membrane over a great part of its extent—liver gorged with blood—spleen small and dense.

Remarks. Here was a case in which, before the post-mortem, one might have supposed great cerebral hemorrhage had taken place, the patient having presented the symptoms characterising a violent attack of apoplexy. The scream she uttered, her putting her hand towards her head before falling, indicated that she experienced a painful sensation in the brain. Such a cry does not usually precede an attack of apoplexy, it being rather connected with epileptic fits—after once falling without consciousness, she remained deprived of sensation and motion, and at the end of some hours she died in the way that apoplectics generally do. Yet all that was found in the brain was a greater than ordinary injection of the two hemispheres. This certainly is a very slight lesion to account for such violent symptoms. It is probable that a similar injection takes place momentarily in persons who are momentarily seized with giddiness and other signs of cerebral congestion, without any thing fatal resulting from it. This same injection is also no doubt the only lesion in the brain in those cases where all the symptoms of an attack of apoplexy come on, which, after continuing some hours, entirely disappear, without leaving any trace of their existence. It is not probable that, in such circumstances, hemorrhage takes place; for the blood once effused into the cerebral pulp could not be so soon absorbed. We have seen cases of this kind, in which complete hemiplegia, preceded and accompanied by loss of consciousness, and by stertorous respiration, likewise disappeared after the lapse of some hours. In those cases where loss of motion and sensation limited to one side of the body seems to indicate a more deep-seated lesion in the cerebral hemisphere of the opposite side, is it still possible that there may be but mere cerebral hyperemia without any escape of blood from its vessels? The following will prove that such may be the case.

CASE 2. *Attack of Apoplexy supervening on a Chronic Affection of the Thoracic and Abdominal Organs. Hemiplegia. Death two days after this attack. Considerable Injection of the Substance of the Cerebral Hemispheres. No other Lesion in the Nervous Centres.*

A man, 72 years old, entered the Maison Royale de Santé the 7th July, 1830. Six months before he had been operated on for hydrocele. When eighteen years old he had had a copious hemoptysis; more than three glasses full of blood had been expectorated by him in the space of fifteen hours. Since then no return of the hemoptysis—but all his life he was subject to a cough. When we saw him, we discovered, on examining the abdomen, a bosselée tumor, which could be traced into the right hypochondrium, the flank of the same side, to the epigastrium, to level of the umbi-

licus, and even into the left hypochondrium: this tumor appeared to us to appertain to the liver; it could be pressed without causing pain. For the last two months only, the appetite was lost; the patient had neither thirst, nausea, nor vomiting; the stools were for a long time frequent and of little consistence; the tongue was covered with a thick, somewhat viscid white mucus: there was an evident fluctuation in the abdomen; the legs were œdematous, and the bursæ seemed infiltrated with a considerable quantity of serum. A very loud respiratory murmur without any râle, extending over the entire chest; pulse was frequent; skin hot; a copious deposition of rosacic acid appeared in the urine. During the two following days the tongue became red and dry. On the 10th, at about 3 o'clock in the afternoon, new symptoms suddenly supervene: the patient loses consciousness all at once; and at our visit on the next morning we were told that the preceding night he had an attack of apoplexy: his state then was as follows: he lies on his back; face much injected; eyes closed; on raising the eyelid, we observe the globe of the eye move slowly; on bringing the finger near it, he quickly depresses the eye-brows; the pupils moderately dilated and equally so on both sides; the right commissure of the lips slightly drawn upwards; the left upper extremity, on being raised, falls again by its own weight as an inert mass; no pain evinced on pinching it. The skin of the left lower extremity equally deprived of sensibility, and it seems deprived of all power of motion. On the right, however, the extremities are capable of performing some movements; when the right arm is raised, it is retained in the air by the patient, and does not fall again instantly, as the left. Intelligence entirely gone; the patient resembles a person in a profound sleep; we cannot see his tongue. The pulse lost the frequency it had the preceding days; (bleeding to sixteen ounces—blisters to the legs—purgative lavement.) During the day the patient gave some signs of consciousness, and spoke a little. On the following morning there was a visible improvement—he answered questions with precision—lips and tongue in the natural state—he was also able to perform some motion with the extremities of the left side; but these limbs were evidently weaker than those of the right side: their sensibility was also less—pulse had resumed some frequency. Towards noon all consciousness was again lost; face very much injected, and up to the following morning he remained in a state of coma from which nothing could arouse him. At our visit at 8 o'clock we find him absolutely in the same state as on the preceding evening; respiration stertorous. He died at noon.

Dissection, 19 Hours after Death.—Cranium. The meninges very much injected; sinuses of the dura mater full of blood. Through the entire extent of the cerebral hemispheres, every slice of the nervous pulp presented a very remarkable number of red points. In some places these red points, which are the orifices of so many vessels, filled with blood, are so densely collected, that there result from them bright red spots, a franc piece in diameter. *Thorax.* Close adhesions of the left pleura above and behind; the bronchi considerably dilated; at the summit of the left lung there is a black colour, as also an induration of several lobules. In the midst of these lobules, which were become impermeable to air, were found several small bony concretions, all nearly the size of a grain of barley. These concretions are as hard as real bone; several of them were ramified. Beside them

were found other concretions, of softer consistence, like lime on which a little water was thrown. Close adhesions of the pleura towards the summit of the right lung; in this summit were discovered cavities communicating with one another, which might at first be taken for caverns, but which a closer examination shewed to be bronchi, very much dilated; around them were several lobules, black and hard; no trace of tubercles; liquid black blood filled the right cavities of the heart; the left ventricle empty; a black clot, of some consistence, distended the left auricle; a little ossification at the base of the aortic valves. Some small bony patches scattered over the aorta. *Abdomen.* Limpid serum in the peritoneum; on the inner surface of the stomach, towards its small curve, was an ulcer, about the breadth of a five-franc piece at least, with everted edges. The tissue constituting its bottom and edges possessed all the characters of encephaloid matter. The liver very voluminous—about two-thirds of it were changed into encephaloid substance: we observed, 1mo, also great development of the circumvolutions of the yellow substance; in several points a bright red colour, seeming to depend on an unnatural development of the vascular tissue: 2do, in other parts was found, mixed with the tissue of the liver, a pale greenish substance, possessing all the characters of fibrine, which had lost a considerable part of its colouring matter, such as is often found in the cavities of the heart; 3tio, on removing still more of its colouring matter, this substance appeared changed into encephaloid matter. Spleen very dense and hard. Between the spleen and kidney was found an encephaloid mass, of the size of a pullet's egg—two other similar masses, the size of a nut, were attached to the great epiploon.

Remarks. This case resembles the preceding, in the rapid manner in which the symptoms came on, as well as in the nature of the latter. Here, again, is a group of symptoms, similar in every respect to those characterising an attack of apoplexy; and on opening the body, we find not a trace of hæmorrhage in the brain, but only a very remarkable injection of its vessels. This injection, which gave an almost uniform red tint to some parts of the brain, was equal in both hemispheres; and yet motion was abolished in only one side of the body, precisely as in cases where one of the hemispheres has become the seat of effusion of blood. Another instance of the inadequacy of our present means of investigation, to explain the infinite variety of the symptoms by anatomical lesions; and observe, we cannot here even call the play of sympathies to our aid, for certainly the hemiplegia did not depend on this. The latter symptom disappeared twenty-four hours after it occurred—then it returned, and this circumstance might have inclined one to think, that the cause which produced it was not itself connected with any serious lesion of the brain; the intelligence also returned for a time, but that is also observed in cases of cerebral hemorrhage. The hemoptysis, which appeared in early life and never returned, as also the bony concretions in one of the lungs, the dilatation of the bronchi of the other lung, and the morbid structures seated in several of the abdominal viscera, render this a very remarkable case.

CASE 3.—*Signs of Cerebral Congestion existing for several years. On a*

sudden, Hemiplegia of the Right Side, not preceded by Loss of Consciousness; subsequently sudden Abolition of Intelligence, Coma and Death.

A woman, about 50 years of age, entered the Hôpital Cochin with an ascites of several months' standing. She stated, that for ten years, she had scarcely passed a week without being affected with dizziness so great, as to oblige her to seek support to prevent her from falling. These dizzinesses used to last for some minutes; they were accompanied with tinnitus aurium, and often when they ceased, the patient used to feel a pricking sensation at the ends of the fingers, which were occasionally as if numbed. *There are some days, she says, when the objects which I touch are separated from my hand by a piece of velvet.* However she never lost consciousness—intellect clear, and memory good. She expressed a great wish to be tapped, and I yielded to her request. After the fluid was removed, I discovered in the right hypochondrium a large tumor, which extended to the navel, which at this part terminates in a mousse edge, and resembles in every way an enlarged liver. This tumor is found in the epigastrium; it disappears towards the left hypochondrium. Three days after the tapping, the patient became weak, her tongue became a little dry, when, after another attack of dizziness, without loss of consciousness, she felt, as often before, a numbness of both hands, but principally of the right; this numbness continued longer than usual: she fell asleep about eleven at night—on awaking, she could move the extremities of the right side. The following day complete hemiplegia of the right side, the sensibility of the paralysed limbs still perfect—intellects still good. The two days following the hemiplegia continued. On the third day after the hemiplegia appeared, speech altogether suspended; she can no longer give any sign of intelligence; the four extremities, when raised, fall as inert masses; eyelids closed, and when we raised them, the globes of the eyes remained immovable. Coma then came, and in two hours after the respiration became stertorous, and she died.

Post-Mortem.—Cranium. Vessels of the cerebral membranes gorged with blood; remarkable rose-coloured tint of the grey substance of the circumvolutions; unusual injection of the medullary substance of the cerebral hemispheres, equally marked on both sides. *Thorax.* Great infarction of the lungs. Heart sound. *Abdomen.* Occupied by an enormous tumor, which conceals all the other viscera; this was the encysted dropsy of the right ovary—it consisted of two parts, the upper part solid, which, by reason of its situation, form, and relations, had been looked on as a tumor of the liver; the lower one was softer, and gave, on pressure, a manifest sensation of fluctuation. Internally it consisted of a great number of cells, which contained various sorts of fluid.

Remarks. Here is another form of cerebral phenomena; and, on examination, the same state of the nervous centres—sanguineous congestion of them, and nothing more. In this case, the patient had been for several years threatened with apoplexy; then, at the end of one of those giddinesses, to which she was subject, she was struck with hemiplegia, and soon after died, amidst the total suspension of the functions of the life of relation. There is this notable difference between the present case and that which precedes it; it is that, in the one, the loss of consciousness coincided with

the hemiplegia, whilst, in the case now before us, the paralysis preceded the loss of consciousness. Thus all the combinations of symptoms produced by cerebral hemorrhage may co-exist with a simple sanguineous congestion of the encephalon. In the following case we shall see other symptoms appear, which are no longer those of simple hemorrhage, and are ordinarily regarded as more particularly connected with softening of the brain.

CASE 4.—Pulmonary Phthisis—sudden Loss of Consciousness, with permanent Flexion of the Left upper Extremity—Death, twenty-seven Hours after the Appearance of these Symptoms. No other Lesion in the Nervous Centres, except a bright Red Injection of their Substance.

A man, 36 years of age, entered the hospital, La Pitié, with all the signs of phthisis, already far advanced. For some days he complained of a rather acute pain towards the right temple, and a slight numbness of the extremities of the left side; then, on leaving his bed one morning, he fell suddenly, deprived of consciousness. When carried to bed he did not come to himself, and the following morning we found him in the following state. Face very much injected—his attitude that of a person asleep; answers no questions, and appears quite a stranger to every thing passing around him. The left commissure of the lips slightly drawn up. The tongue cannot be seen; the fingers of the left hand strongly flexed on the palm of the same hand, and cannot be extended. The left fore-arm is also flexed on the arm, so as to form with it a very acute angle; the right upper extremity, when raised, falls again as an inert mass, as do also the two lower extremities; pulse small, not frequent; respiration embarrassed. Two hours after we left the patient, the two upper extremities were agitated by convulsive movements, which do not last, and in the afternoon he died.

Post-Mortem.—Cranium. The substance of the two cerebral hemispheres were very much dotted with numerous red points. *Thorax.* Tubercular excavations in the two lungs. Heart firm, with slight hypertrophy of the parietes of the left ventricle—black, liquid blood in its cavities. *Abdomen.* Greyish tint on the inner surface of the stomach. Numerous tubercles in the small intestine. Liver and kidneys gorged with blood.

Remarks. The symptoms here were similar to those which so often announce softening of the brain; and yet there was no trace of such a lesion, and notwithstanding the difference in the phenomena on both sides of the body, a sanguineous congestion, equal on both sides, was all that was discovered. Why was there flexion of the limbs in this case, and not in the preceding cases? Anatomy does not inform us. Is it not a circumstance worthy of remark, that the four cases of cerebral congestion now reported, regarded individuals labouring under chronic affections at the time the brain became congested in them? In three of them, hematosiis was for a long time viciated; they were meagre, bloodless, and appeared to be in a condition entirely opposite to that which is usually laid down as favouring cerebral congestions; an additional example to prove, that the facility with which local hyperemias are produced, is not always in the direct ratio of the plethoric state of the subject.

RESUME.

The cases now recorded have presented the principal forms symptomatic of hyperemia of the cerebral hemispheres. On combining with these few cases, which ended in death, several others of the same kind which terminated favourably, M. Andral lays it down, that cerebral congestion may present itself to us in one of the eight following forms.

The first form is characterized principally by dizziness of greater or less intensity: the patients may be affected at the same time with pain of head, dazzling, ringing in the ears, momentary aberrations of vision, temporary embarrassment in speech; a sense of formication in the limbs, and sometimes in the face. The countenance is in general flushed, eyes injected, pulse ordinarily not frequent, and of variable strength. This state may last but for some moments, or some hours, but it may also be prolonged for several months, nay, continue even for several years. In some persons it shews itself but once; in others, it re-appears at intervals more or less remote. Our author has seen a man, 59 years of age, who, for the last 30 years, had not passed a single day without having, in different degrees, one or other of the symptoms above-mentioned. Another person had experienced them since the age of thirty years till he was thirty-four. He then became completely freed from them till he was forty-eight years of age, when he was again attacked with violent dizziness. M. Andral has noticed the cases of several persons, in whom every year, nearly in the same month, these attacks of dizziness re-appeared. In some females, they manifest themselves regularly at the return of each menstrual period.

After this dizziness has lasted a shorter or longer time, it may happen that it attains all at once such an intensity, as to be changed into a sudden loss of consciousness; but the latter may likewise supervene without having been preceded by dizziness. It is this sudden loss of consciousness, with or without preceding dizziness, which characterizes the second form of cerebral congestion. In this form the patients fall to the ground, deprived suddenly of all intelligence, sensation, and motion; but, if their limbs be raised, they do not fall back again by their own weight, and some patients can sustain them in the air. There is not, then, properly speaking, any paralysis. They may remain in this state from some minutes up to twenty-four or thirty hours; then they come to themselves and are quickly restored, without retaining any lesion, either of sensation or motion. Others, after having come to themselves, retain for some days a little difficulty in the performance of some of the functions of the life of relation. Thus, their speech is embarrassed, or their different movements are difficult.

At the same time that the patients fall, deprived of consciousness, they may be struck with paralysis, either general, or confined to only one side of the body. This is the third form of cerebral congestion. But, almost at the same time that the loss of consciousness disappears, the paralysis is also seen to disappear, so that cerebral hemorrhage cannot be admitted to have taken place in this place. The cases above cited prove the possibility of this paralysis, without any effusion of blood having taken place into the brain. Instead of general or partial suspension of motion, this function may be performed in a manner disorderly and irregular, and without any participation of the will. Then, at the same time that there is loss of consciousness,

there are observed either different convulsive movements, or permanent contraction of a certain number of muscles; all these symptoms last, at the utmost, for some hours—they then disappear, without leaving any trace behind. This constitutes the fourth form of cerebral congestion. In a fifth form, there is no longer loss of consciousness: it is paralysis that comes on at the very first, sometimes limited to certain muscles of the face, sometimes extended to the entire of one side of the body. This paralysis disappears very promptly, oftentimes a few hours after having commenced; and from this circumstance it is not to be presumed that it is connected with a hemorrhage, or softening. Our fourth case actually proves the contrary. The course of this paralysis was very remarkable in the following case. A middle-aged man, working in the quarries near Paris, was suddenly seized, on finishing his dinner, with a numbness of the right hand; an hour after, the entire upper extremity was totally deprived of motion; no pain was felt in it, nor did he complain of his head. At five o'clock in the evening, he had a sense of formication in the right foot; soon the power of motion was equally lost in the lower extremity of the right side: he entered the Hospital Cochin. On the following morning, the hemiplegia of the right side was complete; the sensibility of the paralysed limbs was still retained—he cannot move the right cheek, and, when he speaks, the left commissure of the lips is drawn up—the direction of the tongue is straight—intelligence perfect: he feels a numbness (this is his own expression) towards the frontal region—he was bled to sixteen ounces. In the course of the day, he was able to make some slight motion with the extremities of the right side. On the following morning, there was no trace of paralysis. This certainly is not the way in which the effects of cerebral hemorrhage disappear, or of any lesion affecting the interior of the nervous mass.

The sixth form of cerebral congestion is characterized by the sudden appearance of convulsive movements partial or general, without preceding loss of consciousness. These movements promptly disappear, without leaving any trace behind them. They may also come on, after the persons have experienced attacks of giddiness for a shorter or longer time, and the latter may even survive them. In a seventh form the cerebral congestion no longer produces coma; it no longer exercises any perceptible influence on the movements; the intelligence is the function here especially disturbed; violent delirium is observed, accompanied with great developement of muscular strength, most frequently some time before death, the delirium is replaced by a state of coma, which becomes more and more profound: however, M. Andral states that he has seen cases in which up to the moment of death, the patients retained great agitation of the limbs, and ceased not to speak and vociferate. The most remarkable case of this kind which our author met was that of a middle-aged man, who for several hours uttered incessantly cries so loud as to disturb the rest of the entire ward. Suddenly he was no longer heard; when the attendant approached his bed, he was dead. A thunder-bolt could not have struck him more promptly. On opening the body no other lesion was detected except considerable injection of the nervous mass. He now notices the eighth form of cerebral congestion, in which continued fever appears at the commencement, at which time those symptoms principally predominate, which appertain to the first form of cerebral congestion already described. M. Andral particularly observed this form in some young soldiers,

who were admitted in considerable numbers into the wards of the *La Pitié*, in the beginning of the Summer 1831. After laborious exercise several of these soldiers were seized with violent pains of head, vertigo, ringing of the ears; some even fell suddenly deprived of consciousness, and on coming to themselves they remained with the symptoms above detailed. On entering the wards a little time after the attack of their malady, they presented the following state: face red, eyes injected and moistened with tears; ringing of the ears, vertigo; great dizziness, which made them afraid of standing erect, lest they should fall. Frequent epistaxis; general debility—continual tendency to sleep; pulse strong and frequent; skin hot; no appreciable alteration with respect to the digestive or respiratory organs. This group of symptoms lasted from between three to twelve days; almost all of them were bled; some were merely subjected to the use of diluent drinks. By degrees the fever lessened, according as the symptoms of cerebral congestion disappeared. Though, as our author observes, it was not demonstrated that all the disease in these cases was seated in the brain, though there might have existed only mere general excitement, in which this organ participated, still the prevailing symptoms were always those of cerebral congestion; and on the removal of the fever, they were the only symptoms observed, and the only therapeutic indication was to combat them. Our author next considers those various causes under the influence of which cerebral congestions are found to occur. From his own experience, as well as from the accounts published by several medical men residing in different countries, he feels himself warranted in concluding, that these congestions find at least an occasional cause of development in the two extremes of temperature, and that they are reduced to their minimum of frequency under a mild and uniform temperature.

Baglivi in 1694, and Lancisi ten years after, saw apoplexy become so common in many parts of Italy, that they have actually described it as invested with all the characters of a genuine epidemic.

With respect to the influence of the quantity of electricity with which the atmosphere may be charged, on the production of cerebral congestion, our author professes himself unable to offer any opinion. He cites a fact however to prove that electricity, used as a therapeutic agent, may produce such a state. It was the case of a man, who had long been complaining of continual dizziness brought on by cerebral congestions, which were in general removed under the influence of bleeding and purging—he was at last attacked with apoplexy—loss of speech, irregular respiration, &c. By bleeding and purgation his condition was considerably ameliorated. After some months every encephalic symptom had disappeared—speech nearly restored; some degree of action had also returned to the affected limbs, when Dr. Strambio wished to try the effect of electro-puncture in order to bring back innervation to the semi-paralysed side. Dr. Fantonelli performed the operation as follows: he introduced a needle at the lower part of the neck on the side opposite the paralysed limbs, then another needle into the external malleolus of the affected leg; a metallic wire communicating with the two needles, was brought in contact with a voltaic pile of only five discs, so that the negative pole corresponded with the needle of the affected part: the introduction of the needles was not painful; but at each shock, acute pains and violent contractions were manifested in the muscles nearest to the needles, and par-

ticularly in those of the affected part. After five or six electric shocks they were obliged to desist, the pain becoming intolerable. The experiment was performed three times. After the first the patient was more cheerful, and his movements were more free; at the second he felt some uneasiness; at the third he was attacked with fever, and symptoms of cerebral congestion. Bleeding and revulsives quieted these symptoms very soon; but his former state returned. At present his speech is nearly gone, and the movements of his leg are very weak. Arnica and rhus radicans were tried but to no purpose, nay rather disadvantage. More positive researches than any yet made are necessary to establish how far a diet usually strong and exciting directly influences the production of cerebral congestion. In order that it should do so there must be at least a disposition on the part of the individual. Alcoholic liquors will, beyond all doubt, produce cerebral congestion. Nothing resembles some of the forms of cerebral congestion described more than intoxication. M. Andral states he had twice an opportunity of opening the bodies of persons, who, after indulging in strong liquors to excess, fell down drunk dead* (*ivres morts*) according to an expression consecrated by use. What we found was as follows: In both, the pia mater covering the convexity of the cerebral hemispheres was very much injected; the grey substance of the circumvolutions participated in this injection; the entire substance of the hemispheres was traversed by a great number of red points; the ventricles contained a moderate quantity of serum; the cerebellum was also injected, as well as its membranes, but not more than the brain. In no part was the consistence of the nervous mass altered. He found neither in the ventricles nor elsewhere any odour of alcohol, as was discovered within these ventricles in an individual whose case is given in Dr. Cooke's *Work on Nervous Diseases*. In this latter case the body was opened immediately after death; there was found in the ventricles a clear fluid which had the taste and smell of alcohol, and which took fire on being brought near a burning body. In one of the cases we examined, the mucous membrane of the stomach presented in several parts, nearly amounting to one-third of the stomach, a surface dotted with bright red points; in the other, the gastric mucous membrane was of a white colour; it was not softened in either case.

Alcoholic liquors have not only caused cerebral congestions; they have also sometimes produced hemorrhage either around the brain into the sub-arachnoid cellular tissue, or into the nervous substance itself. These facts prove beyond a doubt that alcoholic liquors produce drunkenness by acting directly on the brain and not through the intervention of the stomach. Here is what was observed regarding the symptoms in one of the above-mentioned cases, (the second.) A man was brought to the La Charité about an hour after having drunk an enormous quantity of brandy and other alcoholic liquors. For the last half hour he had been in a state of the most profound coma; skin seemed insensible; respiration stertorous; pupils exceedingly dilated; pulse frequent and full. This state lasted without any

* The expression which use has consecrated among us, namely *dead drunk*, is used to signify not precisely the same thing as is here meant by *ivres morts*.—R.

change for twenty-four hours; it then ceased, and was suddenly replaced by furious delirium; the latter lasted about 15 hours; at the end of this time the coma returned; the respiration became more and more embarrassed, and the patient died. We have already seen the lesions found in the body. Active treatment was employed; he was twice bled; thirty leeches were applied to the neck; his head was covered with ice, and his lower extremities were surrounded with sinapisms. This group of symptoms, as well as the post mortem examinations, sufficiently prove the direct influence exercised on the brain by alcoholic preparations.

A great number of substances, ranked as narcotic poisons, have commonly the effect of determining in the brain a greater or less congestion. But certainly it is not by this congestion alone that the special phenomena produced by each of them can be explained. Let a man have been poisoned by alcohol, by opium, belladonna, tobacco, digitalis, camphor, prussic acid, &c. there will always be found in the brain, when examined after death, one of the same modifications, which will vary only in intensity; this will always be an hyperemia; and yet what can be more dissimilar than the functional disturbances, to which the use of these instances shall give rise. Beyond the hyperemia the only phenomenon which appears to us after death, there are then in the brain other modifications produced, which are no longer proved by the scalpel, but by the diversity in the nature of the symptoms observed during life. It is not then the cerebral congestion which is the cause of the specific symptoms which are produced by the different substances which have been just named; this congestion is but one of the elements of the morbid state to which they give rise, a secondary element, the intensity of which does not increase with the severity of the symptoms, and which may even be wanting, without the latter ceasing to exist. Is it true that the specific symptoms produced by each of them may be explained by the influence which each of them exercises over a particular part of the encephalon? Is it true, for instance, that opium acts especially on the cerebral hemispheres, alcohol on the cerebellum, belladonna on the tubercula quadrigemina? This is not the place to discuss the value of the physiological experiments by the aid of which an endeavour has been made to establish their specific actions. All that can be said is, that hitherto the observations made on man have not sufficiently demonstrated these results, neither have they disproved or invalidated them. However we shall remark that in these two cases of poisoning by alcohol which we have above mentioned, the congestion was seated in the cerebral hemispheres as well as in the cerebellum, and that the latter was not the seat of any specific lesion, at least of one which our present means of investigation will permit us to recognize. Besides, nothing is more variable, as every body knows, than the influence exercised on the encephalon by the different substances whose action we here examine. There are in this respect individual susceptibilities, instances of which have fallen under the observation of every medical man.

After having considered some of the external circumstances, which by the effects they produce on the animal economy may favour the development of cerebral hyperemia, he now directs his attention to the economy itself, and considers whether it will not present certain conditions, which may also have their share in the production of encephalic congestions. Among these

conditions he reckons some states of the brain itself; thus forced exertion of the intellect is an unquestionable cause of cerebral congestion. He mentions the case of a young man, 27 years of age, who, after having devoted himself for a month unceasingly to very painful mental exertion, fell down suddenly, deprived of consciousness and motion: he was considered as struck with a severe attack of apoplexy; he was immediately bled: at the end of an hour he recovered the use of his senses; he was not paralysed: but his limbs on the right and left were as it were benumbed; he stammered, recovered not without difficulty the thread of his ideas, and stared at those around him with an astonished, and, as it were, a stupid air: these phenomena lasted for eight hours, continually diminishing; then they disappeared. There remained however a certain vagueness in his ideas, which did not leave him, till he remained for a considerable time in the country. Strong mental emotions have more than once produced cerebral congestions: which have proved fatal.

Certain affections referrible to the brain may also determine in this organ a congestion, which medical men have sometimes erroneously taken for the cause of the disease, as epilepsy for example; but though not causing the attack itself, the congestion accompanying or succeeding it becomes itself the cause of certain morbid phenomena. It is on this that the cerebral phenomena seem to depend, which are often observed after the attack has terminated, as certain disturbances of the intellect, or else a state of coma, which last a longer or shorter time; or again, certain disturbances in the power of motion, as paralysis, or a momentary contraction of the limbs. The congestions which take place in the brain of epileptic patients, during the fit, leave also traces on their countenance. Thus several of them present, for the two or three days following the fit, slight ecchymoses on the skin of the cheeks and on the conjunctiva. Our author saw one instance in which after every fit, a broad livid spot, like that produced by a contusion, covered the forehead and eye-lids: this mark diminished gradually, and there was not a trace of it at the end of six or seven days.

Accidental products developed in the brain, old apoplectic cysts existing in this organ, must again be considered as so many thorns, which from time to time call around them, as around a centre of irritation, an hyperemia variable in intensity and extent; by the more or less frequent returns of this hyperemia are explained certain phenomena, intermitting as their cause, which appear at intervals in individuals labouring under a cerebral affection of long standing, phenomena most usually combated by bloodletting. In this way, in particular, may be explained those intermitting convulsions to which several children are subject, in whose brains tubercles exist; it often happens, that when once the convulsions have ceased, there no longer remains any cerebral symptom indicating the existence of the accidental product; a remarkable instance of intermitting phenomena produced by a constant lesion. The influence exercised by the different organs, in health or disease, on the production or return of cerebral congestions, merits particular attention. There is no doubt, for example, that in those who are predisposed, the process of digestion favours the return of these congestions; to a slight degree of these congestions, we may attribute the drowsiness exhibited by certain persons after meals. With respect to diseases of the stomach, they possess, in certain cases, a manifest influence on the developement of cerebral

congestions. Thus, at all ages, and particularly in infancy, acute gastro-enteritis may be accompanied by symptoms announcing the existence of an encephalic hyperemia. The same happens, though more rarely, in chronic gastro-enteritis.

The circulatory organs may, also, by the different states in which they may happen to be, produce different degrees of cerebral congestion. There cannot be a doubt but that the variable degrees of force with which the heart drives the blood towards the brain, may influence the production of cerebral hyperemia. Thus our author, and every medical man, may often see persons, in whom the increase of violence in the palpitations with which they were habitually attacked was constantly accompanied with vertigo, dizziness, ringing in the ears, and the other symptoms indicative of cerebral congestion; symptoms too often set down as purely nervous; some experience a sense of numbness at the ends of the fingers; all these phenomena cease, when the palpitations become less violent. Thus, our author feels himself warranted in stating, that increase in the force of the heart's impulse, whether it be nervous, or arising from hypertrophy of the organ, has an undoubted influence on the production of cerebral congestions.

It has been stated that an obstacle to the course of the arterial blood, below the arch of the aorta, must produce the same effect as hypertrophy of the left ventricle, and favour, in the same manner, the production of cerebral congestion. A case has even been published, in which an attack of apoplexy was considered owing to a tumour, which compressed the aorta a little below its passage through the diaphragm. If such a cause was real, it certainly should have its maximum of influence, as our author very properly observes, in cases where the aorta, immediately below its arch, was considerably contracted, or even obliterated: now, in the cases of this kind which have been recorded, there is no mention whatever, either of congestion or cerebral hemorrhage. When any obstacle whatever, is opposed to the free return of blood from the brain to the heart, our author asks, Is the result of this a tendency to cerebral congestion? As a proof that such is the case, he refers to the sensation experienced by a person whose neck is very much squeezed; cerebral congestion has also been found in persons who have died by strangulation. Another question may be here started: should we, says M. Andral, rank among the causes productive occasionally of cerebral congestion the increase in the circulation, such as is produced by fever? Since, in this state, several of the tissues are reddened, is it not natural, he says, to suppose that the same will happen to the brain? There certainly is no other mode of accounting for the headache, vertigo, and other cerebral symptoms accompanying the access of fever. In the case of children, this morbid state is frequently accompanied with somnolence; we often see adults, also, very drowsy, when labouring under even a slight febrile attack; delirium too frequently is observed in such cases, which goes off according as the fever declines. The extreme sensibility to external impressions, the sense of fatigue, those dull pains in the limbs, and that feeling of general debility, which so often accompany well-marked fever; these surely are also phenomena which accompany certain forms of cerebral congestion. The real existence of the latter cannot be questioned in such cases: but here it must be observed that, far from being the cause of the febrile disturbance, the congestion is often but an effect of it. The production of cerebral con-

gestions is also favoured by the inflammation of the different organs. The hyperemia, which does not constitute inflammation, but which is one of its elements, may be repeated on the brain, and this is observed, both when this inflammation still continues in all its force, and when it has prematurely disappeared. As an example of the first case, we shall instance erysipelas of the face or of the scalp, which sometimes terminates fatally by the cerebral symptoms which are complicated with it, and for the explanation of which no other lesion is found on examination, than a greater or less hyperemia of the encephalic mass. As an example of the second kind, we shall instance what occasionally happens during measles or scarlatina. In some children, the eruption has scarcely shewn itself when it begins to fade, and, at the same time, the face and eyes become very much injected; the children complain of headache; they become debilitated; all motion is painful to them; they soon become comatose, and die. To account for these serious symptoms, what do we find in the encephalon? Sometimes a seropurulent infiltration of the meninges, or a perceptible distention of the ventricles by turbid or limpid serum; but most frequently nothing more than simple hyperemia, which, in more than one case, is itself very well marked.

It is, again, common enough to see signs of cerebral congestion come on during the febrile disturbance which precedes the eruption of small-pox, measles, or scarlatina; here we see many children attacked with convulsions, stupor, delirium, all which phenomena vanish when once the eruption comes out. Our author has hitherto considered the influence of the forces, whether mechanical or vital, which circulate the blood, in the production of cerebral congestion. He now asks—Are these congestions also influenced by the different degrees of activity of sanguification, that is, by the greater or less energy of the force which produces the blood? In other words, what is the influence exercised either by a state of general plethora, or by a contrary state, on the production of cerebral hyperemia? Whilst he admits (an admission which cannot be refused by the way) that in many individuals a state of general plethora coincides with the appearance of the symptoms indicating the existence of cerebral congestion, he insists that it is far from being so in all cases, as there are, he says, individuals in whom this congestion appears at the very time when they were in a very obvious and perceptible state of anemia.

Our author next considers the very interesting subject of *masked intermittent fevers*, in which he details the case of a patient who exhibited all the phenomena of *intermittent apoplexy*, which in its return observed the same regularity as the fevers of this name, and presented itself uniformly and regularly with precisely the same types. We observed some years ago, says our author, a very remarkable case of this kind, which we shall here record. A woman, 63 years of age, habitually enjoyed tolerably good health, when one morning on getting up, she was suddenly seized with great illness, vomiting and a violent pain of head; a quarter of an hour after these symptoms appeared, she uttered a loud scream, and fell, deprived of consciousness. We visit the patient about half an hour after the fall; we find her plunged into a profound coma; eyes shut, pupils large and immoveable till the eye-lids are raised, and the conjunctiva is touched with the end of the finger, there is scarcely produced a slight contraction of the eye-lids, and the patient

makes no effort to withdraw herself from this contact. Face injected; commissures of the lips not affected; tongue cannot be seen; the four extremities are in a state of complete relaxation, and the sensibility of the skin covering them appears abolished. The pulse strong and free from frequency—heart beats strongly. This woman appears to us struck with cerebral hæmorrhage considerable enough to engage both hemispheres; we immediately bleed her, and have her removed to the La Charité, after passing the most unfavourable prognosis on her state. What was our astonishment, when the next morning, at the visiting time, we found her sitting up in the bed, possessing all her intelligence, and enjoying all the freedom of motion. What occurred to her was as follows. After the bleeding no amendment manifested itself; she continued plunged in coma till towards six o'clock in the evening; then she came to herself, and, according to the account of the sister of the ward, she no longer appeared ill. From this we thought that the woman had nothing but a violent cerebral congestion, or what is called *coup de sang*.

The day passed on and when we saw her the next day, she asked permission to leave the hospital; but before returning home, she was to pass through new sufferings. We had scarcely left her, (it was then 7 o'clock in the morning) when she was seized with vomiting, as on the day before, then she suddenly lost all sensation and motion; and the same symptoms which were observed on her before entering the hospital now returned. This time they lasted longer; in the evening they still continued; no amendment at night; and when we saw her again at 7 in the morning, she was still in a profound coma. However, she was bled, leeches were applied to her neck; up to one o'clock in the afternoon no change appeared; then the patient opened her eyes, spoke, possessed her intellects, moved her limbs with ease, and a second time was quite well. She then left the hospital. We visit her at her own house; she is quite well; yet she stammers a little; and there is a slight degree of stupor in her countenance. We do not yet suspect an intermitting apoplexy, and no particular medicinal directions were given. The following morning the same symptoms return. They continue the entire day with frightful intensity, and last 35 hours; then, as on the two preceding occasions, the patient comes to herself, and recovers the freedom of her motions. But her intellect is somewhat dull, and she speaks not without difficulty. We then asked ourselves whether we had not to do with one of those diseases described under the name of *masked intermittent fevers*. Ten or eleven hours still remained till the period when the next attack was to take place; we instantly administered by the mouth twenty grains of sulphate of quina; we administered the same dose of this salt in a starch injection, and we placed under each axilla, in each inguinal region, twelve grains of the same salt mixed up with some fresh butter. We await with anxiety for the patient, and also with ardent feelings of scientific curiosity for what will happen the following morning. Towards six o'clock no symptom developed itself; thus the fit is at least retarded, and there is reason to think that if it returns, it will be less intense. Towards noon the patient begins to feel a shivering, which she had not experienced on the preceding occasions; violent head-ach supervened without vomiting; soon after some convulsive movements agitates the muscles of the face; her intelligence becomes disturbed; movements of the limbs not yet changed; pulse accele-

rated; these phenomena succeed each other in the space of half an hour; then they are replaced by a state of coma which lasts for about two hours, and then goes off. The patient then continues for some time, as if benumbed; her skin becomes covered with a little moisture, and again she appears cured. Sulphate of quinine was immediately administered in the same dose, and after the same manner as on the day before; no symptoms of the complaint returned after.

This fact furnishes a very remarkable instance of an intermittent cerebral congestion, which assumed a tertian type, and which was completely stopped by quinquina. It was observed that the third fit was more severe than the preceding two. The sulphate of quinine was administered, and the next fit becomes less severe and of less duration, and it is also very much modified as to its symptoms; now for the first time some shivering marked its onset, and for the first time also its termination is accompanied with some perspirations. So that in becoming less severe, the fit approaches in its symptoms a fit of ordinary intermitting fever.

We have now closely followed M. Andral in his detail of the causes, which usually determine cerebral congestions; and have been somewhat surprised, nay, perhaps disappointed, that among them we find no mention made, at least with that explicitness it deserves, of certain other circumstances, which are so frequently found to determine this phenomenon, we mean, the different pathological states of the lungs; such as condensation from the presence of effused fluid in the pleura; changes in the bronchial mucous membrane from chronic inflammation—emphysema of the lungs—we know that many of the most distressing symptoms of bronchitis, as Dr. Bright well remarks, namely the intense headache, the wandering delirium, and the lethargic coma so often observed in bronchitic patients, are indisputably dependent on the state of the circulation through the brain. It is not however quite evident, how far the mere mechanical congestion may operate in producing these symptoms; the chemical condition of the blood must also be taken into account in the estimate.

Our author having sketched the principal traits of the history of cerebral congestions, starts the following questions; Are the symptoms characterising the different forms of cerebral congestions connected in all cases with the afflux of a too great quantity of blood towards the brain? Do they depend solely on this cause? Are they not sometimes seen as the effect of a quite opposite state of the nervous centres, or in other words, as the effect of their anemia? It is, he says, and we fully agree with him, a pathological law that, in every organ, the diminution of its normal quantity of blood will produce functional disturbances in it, as well as a hyperemic state of it. Nay what is more, these functional disturbances are at times precisely similar. Thus, let an impoverished thin blood circulate through the heart, and palpitations of this organ will be the result, just as if it contained too much blood. Dyspnœa will come on equally, whether the lung be the seat of greater or less hyperemia, or whether the air, on entering the pulmonary vesicle, no longer finds sufficient blood to act upon. Our author has frequently seen patients, who appeared completely anemic; their face quite pale, and their skin presenting a colour like that of wax; the least exertion set them panting for breath—they were subject to violent palpitations of the heart, painful and laborious digestion. These persons at the same time com-

plained of head-ache, dizziness, vertigo, tinnitus aurium; some even occasionally, or even continually, had numbness of the limbs—others were annoyed with hallucinations in sight and hearing. These individuals had been for a long time subject to copious hæmorrhages by different outlets, either through the nasal fossæ, the rectum, or uterus. In all such cases it must be admitted that the brain is disturbed in its functions, in consequence of being no longer stimulated or nourished by the blood sent into it; which blood has now become too poor in quality, or too small in quantity.

If now, observes our author, we leave the mere observation of facts, and endeavour to account for them, we shall soon be convinced of the insufficiency of the Brunonian theory to explain the very frequently similar symptoms which result from cerebral hyperemia and cerebral anemia. These symptoms do not necessarily indicate either a hypersthenic, or an asthenic state. This may be owing to a mere perversion of the cerebral influence, a perversion not to be referred to a plus or minus of vitality, but resulting from the circumstance of the brain's no longer receiving its normal quantity of blood, and not merely because it is then less excited.

But this is not all; when we have referred the symptoms to hyperemia in one case, and to anemia in another, have we come to the bottom of the matter? By no means; for this hyperemia and this anemia are themselves but effects, which may be often produced by the same influence: thus, by a mental emotion, the skin of the face becomes red in one person, and pale in another.

In the nervous centres, as in other parts, before the production of hyperemia or anemia, we must conceive a primary modification of that force, whatever it be, which subjects the cerebral circulation to certain rules. Amidst these numerous currents, these oscillations of globules, which are going on within the organic tissues, how many causes always present, whose influence is wholly unknown to us, may derange a current and modify the distribution of the globules. On attentively considering the merits of this question we shall soon arrive at the conclusion that hyperemia and anemia, in the brain, are themselves but secondary phenomena, mere effects. But these effects, inconstant and variable, do not necessarily follow the action of the cause; they may be wanting, and yet the symptoms will still remain! For they depend less on the state of cerebral hyperemia and anemia, than on the organic modification, which precedes and produces them.

Having followed our author thus far in his cases of and observations on cerebral congestion, we shall in our next Number present our readers with the subject of hæmorrhage of the cerebral hemispheres.

A TREATISE ON INSANITY AND OTHER DISORDERS AFFECTING THE MIND. By *J. C. Prichard, M.D.*

[Article the Second, continued from p. 448 of No. 4.]

OUR notice of Dr. Prichard's work, in our last number, stopped short at the end of the third chapter, and at a natural division of the subject. The fourth chapter is on the CAUSES of INSANITY. These he divides into two

classes—the predisposing, or antecedent, and the structural changes observed on dissection. It will strike the pathologist at once, that rational doubts may be entertained respecting the propriety of placing these post mortem phenomena revealed by the scalpel, among the *causes* of insanity—or of any disease. Thus, on opening a body after death by pleurisy, the sero-purulent effusion, and even the thickening of the pleura itself, could hardly be considered the cause of the pleurisy. The same reasoning might apply to an infinity of diseases. On the other hand, we are sometimes obliged to content ourselves with the appearances after death, not being able to ascertain the antecedent causes or links of the morbid chain. Fever may be adduced as an example—and perhaps the disease now under consideration—INSANITY. Our author adopts the division of causes into moral and physical, prefacing his subject with some remarks on predisposition. This is branched into constitutional predisposition, whether hereditary or self-acquired—influence of sex, age, climate, &c.—thirdly, external peculiarities of organization, form, complexion, &c.—fourthly, accidental diseases, as of the brain—and lastly, the influence of education, moral and physical, in modifying the “organization of the body and predispositions of the mind.” On all these points our author collects the usual and necessary information befitting an elementary treatise. On few of these points shall we touch. Dr. P. conceives that a predisposition to insanity must exist in the individual: otherwise that the exciting or occasional causes would call forth some other diseases rather than alienation of mind. Intemperance is adduced in illustration. Of the thousands that daily give way to this vice, only a very few become insane—apoplexy, paralysis, dropsy, and other corporeal maladies are much more frequently the result of inebriation. This predisposition may be transmitted from parent to progeny; or it may originate, *de novo*, in the individual. Dr. P. thinks it is of little consequence to inquire which of these two is the case. We apprehend that hereditary predisposition is more formidable than the recently-acquired. The intermarriages among relations have been accused, and perhaps justly so, as predisposing to mental as well as corporeal weakness. M. Esquirol has seen instances where frights, during pregnancy, have produced insanity in the child. It was observed, so far back as the time of Cælius Aurelianus, that the male sex were more frequently affected with insanity than the female. This does not accord with modern experience. In all France, the proportion of female to male cases of insanity is 14 to 11. In Italy the balance is on the other side. In Holland and Belgium the female lunatics predominate over the male, in the proportion of 34 to 29. In Great Britain and Ireland the proportion is 13 males to 12 females. It is difficult to account for these differences in the proportions of the sexes. In America there are nearly two men insane for one woman. Probably the addiction of the male sex there to ardent spirits may help to account for this.

“On summing up the results of his inquiries, M. Esquirol has shewn that in a sum total of 76,526 lunatics confined, though not all at the same period, in asylums or hospitals in various parts of the civilized world, there were 37,825 males and 38,701 females. Thus the proportion of males to that of females is, a fraction being neglected, 37 to 38. This difference is so much the less considerable, as in the general population the number of males somewhat exceeds that of females. Yet, small as it is, it is sufficient, as M. Esquirol ob-

serves, to refute the assertion of Cœlius Aurelianus, who supposed that women are less subject to insanity than men." 165.

Insanity is rarely seen before the age of puberty; but after that period, it may be seen in all the phases of life.

"In the vigour of youth," says M. Esquirol, "mania breaks out with all its varieties of excitement; melancholia is more frequently the lot of the middle period of life, and dementia chiefly threatens advanced age." 166.

According to M. Georget, insanity is most frequent between the years 30 and 40 of life—next in frequency is the period between 20 and 30—and thirdly, between 40 and 60. There is some inconsistency in this statement evidently.

The melancholic temperament is proverbially prone to insanity, and one attack proves a predisposing cause of subsequent ones. The author gives us a short article on education, as a predisposing cause of mental derangement, from which we shall quote one or two short sentences.

"There are two different points of view under which the injurious effects of wrong education may be considered. By too great an indulgence and want of moral discipline, the passions acquire greater power, and a character is formed subject to caprice and to violent emotions: a predisposition to insanity is thus laid in the temper and moral affections of the individual. The exciting causes of madness have greater influence on persons of such habits than on those whose feelings are regulated. An overstrained and premature exercise of the intellectual powers is likewise a fault of education which predisposes to insanity, as it does also to other diseases of the brain."

"The second remark, on the regulation of mental exercise in young persons whose nervous systems are feebly constituted, has a more extensive bearing than on the subject of insanity. It brings forward a suggestion which is of very general interest in these times, in which mental exertion is stimulated to the utmost; and too great sacrifices are often made to the cultivation of the moral or even to the mere acquisition of knowledge, while the education of the moral affections is considered as a matter of secondary importance." 173.

Dr. Prichard proceeds to the productive causes of insanity—moral and physical. In the former class are included all those circumstances "which exert an influence immediately on the mind." Physical causes are those which act immediately on the body, and secondarily on the mind, through the organic structures. Most writers, and our author among the rest, give the preponderance to *moral* causes—and the same might be urged in respect to more diseases than insanity. The influence of the mind on the body is as great as that of the body on the mind. Insanity is rare among savage tribes—it increases with civilization.

"The restraints imposed by social order, the diversity of interests which are excited in civilized communities, the mixed and diversified feelings which are called forth by a variety of sometimes arduous pursuits, long-continued griefs and anxieties, disappointment of hopes long cherished, causes which act powerfully on the moral affections rather than on the animal passions, particularly great and long-continued exertion of the intellectual powers;—these are some of the most obvious traits which distinguish human life in the civilized state from the manner of existence peculiar to savage men. It is among these circumstances, as some celebrated writers have thought, that we are to look for the causes which are most influential in the development of mental diseases." 175.

Our author, however, is disposed to doubt the truth of these arguments, or, at least, to dispute the extent to which they ought to be carried. "I am not without suspicion," says he, "that there is something in the state of civilization which tends to promote the existence of that congenital state of bodily structure on which predisposition to mental diseases depends." This, after all, is merely questioning the *quo modo*, and leaving the *quo* where it stood. Of the moral causes of insanity, care and anxiety, grief and agitations of mind, are the most operative. M. Esquirol informs us that, "at the destruction of the old monarchy, many persons became mad through fright and loss of property. When the Pope came to France, religious maniacs were very numerous. When Bonaparte made kings, there were many kings and queens in the madhouses. At the time of the invasion of France by foreign troops, terror threw many into derangement. The Germans had experienced the same effects, at the æra of our irruptions into their country." The strong passions of the mind come next in order of potency. The former class are generally slow in their operations:—the passions, like whirlwinds, often do their work more quickly. Terror and violent rage are the most rapid of all other causes in dethroning reason. Celibacy must be considered as strongly predisposing to, if not causing insanity. In the Bicetre, in January 1822, out of 1726 females, 980 were unmarried—397 married—232 widows—5 divorced—53 not noted. These were all females. The males only amounted to 764, and were nearly in the same proportion as to the married and unmarried.

The fear of punishment, in a future state of existence, is a well-known cause—or, at all events, a well known phenomenon in insanity. We agree with Dr. P. in the following sentiments.

"As a matter of fact, there is reason to believe that the number of persons who become insane through the influence of religious hopes and fears, is much less considerable than it is generally supposed to be. The circumstance that the mind of a lunatic is occupied during the period of his disease with ideas and feelings connected with an invisible world, is no proof whatever that the derangement of his understanding was produced in the first instance by impressions related to the same subject. To a mind already prepared by disease to indulge fearful thoughts and gloomy forebodings, the unknown future opens a wide field which the imagination is likely to select, and it often dwells upon the evils which it anticipates in another stage of existence, when the original cause of derangement has been some misfortune of the present life, or perhaps some merely physical influence. It is the opinion of a writer, whose judgment on subjects of this nature deserves the highest regard, on account of the extensive research and the deep reflection with which he has investigated the history of mental disorders, that instances of the last-mentioned kind are in fact incomparably more numerous than those in which religious terrors have been the originating cause." 188.

The writer alluded to is Dr. M. Jacobs. There can be little doubt, however, that ranting and fanatical preachers have often unhinged the minds of weak and ignorant auditors—especially females, whose imaginations are more active, and nerves more sensitive than in the rough sex.

"In the kingdom of Naples," says M. Berthollet, "a custom exists of preaching in favour of missions by a particular set of priests. In order to animate the faith of believers, they accompany their orations with particular acts, which are often of such a nature as to produce too powerful an effect on weak minds.

They hold their hands over flaming torches, and whip themselves with scourges garnished with iron points. Their sermons are prolonged till the close of day, and the feeble glare of a few flambeaus heightens the effect of the scene." "One of these sermons gave occasion to the case I am about to describe. The subject was *hell*: to heighten the colouring of the frightful picture which the preacher had traced, he took a skull in his hand, and having raised a question as to the abode of the soul to which it belonged, he exclaimed, invoking it, 'If thou art in heaven, intercede for us; if thou art in hell, utter curses.' He then cast it from him with violence." The lady, whose case is subsequently described in M. Berthollet's memoir, was instantly affected by a morbid change in the nervous system." 189.

Our author takes great pains to ascertain the comparative prevalence of insanity among different religions, or rather sects. The result is not very satisfactory—but one thing appears clear,—that religious insanity is less frequent among quakers than among any class of people.

Dr. P. next comes to the **PHYSICAL CAUSES** of insanity, which he treats of under the following heads, viz. Injuries of the Head—Insolation and Exposure to Heat—Metastasis—Inebriation—Sensuality—Intestinal Irritation—Uterine Irritation. These seven heads occupy only as many pages of the work, and contain nothing that would not suggest itself to the mind of any ordinary practitioner on glancing over the catalogue.

The fifth and sixth chapters, consisting of about 40 pages, treat of the morbid anatomy of insanity. Our author begins with the morbid appearances found in the head, and proceeds thence to those which are presented in other parts of the body. Morgagni, the father of pathological anatomy, relates but seven or eight cases of insanity, where dissection was performed. He found the cerebral hemispheres firmer, and the cerebellum softer than natural, in one or two instances. But Greding was the first who recorded an extensive series of observations on this point, being physician to a lunatic asylum in Germany, where great numbers of the insane are congregated. The following are the principal facts which he noted.

"1. In the *cranium*. 'Experience has proved,' as he says, 'that the skulls of almost all insane persons have a natural shape.' In 16 cases only of the whole number examined, viz. nearly 220, the forehead was contracted, the temples compressed, and the occiput large and expanded. In a few the head was elongated and compressed at the temples. Some had a head almost round, or of a square shape; these were epileptic idiots. Two had small heads, quite circular: these were epileptic madmen. Of 216 cases, including those of madmen, idiots, and epileptics, the skull was unusually thick in 167: this fact was observed in 78 out of 100 cases of raving madness, and in 22 among 30 of idiotism. In many cases the cranium was remarkably thin. Holes were observed in the inner table in 115 out of 216 cases: in other instances bony projection from the inner surface.

2. *Membranes*.—Dura mater firmly adherent to the skull in 107 out of 216 cases; in a few instances of a blueish black colour, thickened and partially ossified. Pia mater thickened and opaque more or less in 86 out of 100 cases of mania; beset with small, spongy bodies in 92 out of 100: these bodies were often united to the surface of the brain, and were in some instances the seats of ossific deposits.

3. *Brain*.—Cerebral substance softer than usual in 118 out of 216 cases: soft and pulpy in 51 cases of mania out of 100, as likewise in 19 out of 24 cases of melancholia, in 8 out of 20 epileptics, and in 16 out of 30 idiots. Those maniacs who had the cerebrum softened had the cerebellum still more soft and pulpy.

4. *Effusions*.—Between the dura and pia mater in 120 out of 216 cases; in 58 out 100 maniacs. Between the pia mater and the surface of the brain in 28 among 100 maniacs. Lateral ventricles in 29 very full of serum, in 23 ready to burst; in 10 among 24 melancholics astonishingly distended. Third ventricle quite full in 57 of 100 maniacs, and in 16 of 24 melancholics. Fourth ventricle ready to burst in 80 out of 100 maniacs, and quite empty in only 3: completely distended in every one of 24 melancholics.

Other appearances.—Plexus choroides in a nearly healthy state in only 16 out of 216 cases, thickened and full of hydatids in 96 out of 100 maniacs. Lateral ventricles either larger or smaller than natural in many cases. Softness of parts of the brain, as of the tubercula quadrigemina in some cases." 211.

Dr. Haslam has given us the result of 37 dissections, in not one of which were the brain or its membranes free from disease. M. Georget, whose researches are extensive and accurate, states the following as the most remarkable of the *post-mortem* appearances: viz. irregular conformations of cranium, the prominences on the right side being generally larger than on the left—general or partial thickening of the cranium—dura mater rarely changed—arachnoid often diseased, generally thickened—pia mater injected, or thickened and infiltrated with serum—volume of the brain sometimes less than the capacity of the skull—brain sometimes very hard—the white substance glutinous, elastic, and bearing distention—but most frequently the brain softened, the grey matter being pale and yellowish—convolutions separated by serosity—pia mater thickened—interior cavities of the brain sometimes much enlarged—in others, filled with a limpid fluid—cerebellum usually softer than the cerebrum—medulla oblongata and spinalis seldom altered in structure.

M. Pinel after observing that the dissection of lunatic heads displayed the same phenomena that are usually seen in other cerebral diseases, seemed to abandon the hope of discovering any pathological anatomy peculiar to insanity. Esquirol appears inclined to fall into the same opinion, though he carefully notes the morbid phenomena revealed by the scalpel. His conclusions are as follows:—

"The inspection of bodies of lunatics offers numerous varieties as to situation, number, and kind of morbid appearances. The lesions of the encephalon are neither in relation to the disorder of the mind nor to the maladies complicated with it. Some lunatics whose mental and bodily disease had given suspicion of extensive organic lesions, have presented but slight changes of structure in the brain, while others whose symptoms had been less severe have been the subjects of great and numerous alterations. But what disconcerts all our theories is that not unfrequently, even in the instance of patients who have passed through all the stages of insanity, and have lived many years under derangement, no organic changes whatever have been traced either in the brain or its containing membranes." 213.

He acknowledges, however, that in the examination of 199 bodies, he found 263 organic lesions of the brain and its meninges—46 of the lungs, the heart, or their coverings—and 113 lesions of the abdominal viscera. But to what, after all, does Esquirol's reasoning tend? Only to this—that disordered *function* does not always leave behind it an appreciable change of *structure*. In mental derangement, as in all other derangements, the organic change is the *effect*, and not the cause of the malady. The primary cause—the disorder—may go on for years, or for a whole life in some cases,

without producing the changed structure revealed by post-mortem investigation. But there is every reason to believe, that the immediate seat of insanity is in the *brain* (or its membranes,) the organ of the mind, although dissection discloses not the *effects* of the disorder. We know that the stomach may be long *disordered* before it becomes *diseased*—that functional disorder of the kidneys may exist for half, or the whole of life, without organic change being found after death. Why, then, should not the material organ of the mind experience the same fate? After all, M. Esquirol admits that the greater care now taken with dissections than formerly, discloses more morbid changes in the brain than his early dissections led him to expect.

“Hence (he says,) few bodies of lunatics are now examined in which there are not proved to exist at the same time injections or adhesions of the meninges, softenings and tubercles in the brain, serous effusions in the cavities, &c. while at the period when we made our earliest investigations, we only kept account of obvious and manifest alterations.” 214.

This speaks for itself. Bayle, who has still more recently prosecuted the investigation, comes to the conclusion, that the seat of insanity is not in the brain itself, but in the meninges—consisting of effusion, the result of inflammation, and, consequently, *compression of the brain*. It is hardly necessary to observe that, according to this view of the case, the actual cause is disturbance of the brain's function from compression. The inflammation and effusion are antecedent links in the chain of causation. The mental malady does not shew itself fully till the organ of the mind suffers. The investigations of M. Calmeil are peculiarly important. It is true that they were made in elucidation of the paralysis of insane persons; but this does not lessen their interest or value.

“1. Bones of the skull sometimes very full of blood, which fills the spongy tissue, reddening it, and exudes from the surfaces of the cranium when denuded and separated from the dura mater. This is mentioned merely as indicative of vascular turgescence often connected with it in the encephalon.

2. Vegetations or excrescences arising from the pia mater, with absorption of corresponding parts of the inner table of the cranium. These are granulations growing up from the surface of the pia mater, penetrating the dura mater, and causing absorption of the inner bony surface. As for the pathology of this appearance, it is remarked that infiltrations and thickenings of parts are found almost constantly under these excrescences of the pia mater.

3. Effusions of serosity in the great cavity of the arachnoid, in the ventricles of the brain, and in the cavity of the rachis. This is one of the most striking and uniform symptoms in persons who have died of general paralysis. The quantity of serosity varies. Six or eight ounces are often found in the cavity of the arachnoid. M. Calmeil attaches less importance to this phenomenon than many have done. The following are his reasons. 1. He has observed it to be wanting in some strongly marked instances of the disease. 2. He has frequently discovered similar effusions in the heads of individuals who had perished under dementia, without any symptom of paralysis even to the last. 3. In cases in which effusions were found of five or six ounces of serosity, the symptoms of general paralysis had been not less intense, or even more intense, than in others displaying effusions of twice that extent. 4. If the compression of the brain was so considerable as many have thought, the structure of its parts would display disorganization of some kind, but the structure of the convolutions, commissures, septum, &c. is uninjured. 5. In cases of chronic hydrocephalus of long duration the deposit of serosity has been enormous, without loss of loco-

motive power till the disorder reached its last degree. 6. If compression from such a cause acted mechanically, we should expect paralysis depending on it to affect all nerves equally or indifferently; no reason could be perceived why the motive faculty should be impaired first in the tongue, then in the muscles of the lower members, and lastly in the upper, as the fact is observed to be in general paralysis. 7. We certainly cannot imagine that, such a cause acting, the upper extremities would still retain their mobility unimpaired, after the total palsy of the lower limbs. For these and other reasons, M. Calmeil concludes that the symptoms of general paralysis are not, as M. Bayle supposed, dependent on compression of the brain, the result of effusion, but on the state of the encephalon which gives rise to such effusion, and chiefly to inflammation, of which the thickenings, adhesions, and vascular turgescence of the pia mater, and the peculiar condition of the cineritious substance otherwise afford sufficient proof.

4. Other morbid phenomena occurring in general paralysis with relation to the state of the membranes are, false membranes, sometimes organized, at others unorganized, between the laminæ of the arachnoid; encysted concretions with hemorrhages between the same laminæ: these phenomena are referred in like manner to inflammatory action, or to erethism in the capillaries of the meninges; simple hemorrhages in the great cavity of the arachnoid; serous infiltrations of the pia mater and the cerebral arachnoid, a phenomenon found in many diseases, but rarely to such a degree as in the paralysis of dementia; thickenings of the pia mater and the cerebral arachnoid; a high state of vascular injection of the same membranes.

5. Adhesions, either general or local, of the internal surface of the pia mater to the cineritious portion of the brain. This is not universally observed in cases of the disease described, although strongly marked. It is important, as giving an indubitable proof of inflammation affecting the surface of the brain.

6. A curious and no doubt important series of observations refer to the state of the grey and white substance.

The grey substance contiguous to the pia mater is softened, and has the consistence of the pulp of a rotten apple. This ramollissement extends to the depth of a quarter or half a line. This appearance is accounted for by the observations of M. Lallemand, who remarks that permanent accumulations of blood diminish the cohesion of any parenchyma; even muscular parts, spleen, lung, can easily be crushed when gorged with blood. In brains of persons destroyed by intense cerebral congestion, the corpus collosum, the septum lucidum, and other parts are found relaxed, and their consistence gives way to slight pressure; it is to accumulation of blood that the loss of consistence in the superficial grey substance in general paralysis is to be ascribed. The same state is further manifested by a violet or red coloration of the pulp and injection of vessels; varieties of colour resulting from inflammation, the only cause that can be imagined to maintain in the brain a continued vascular plethora. 'We conclude (adds M. Calmeil) that the want of cohesion in the grey substance is the result of inflammation.' To phlegmasia under different circumstances, and in a different modification, he likewise ascribes the hardening of the convolutions observed in some rare instances of the same disease, although he does not agree with MM. Bouchet, Casauvieilh, and Bouilleau,* in maintaining that this hardening is the first degree of inflammation.

This softening of the grey substance peculiar to general paralysis, in which it is separated into laminæ, and the external adheres to the pia mater, is, however, strongly distinguishable from ordinary ramollissement of the brain, in which its

* Bouilleau, *Traité de l'Encephalite*, et *Archives Générales de Médecine*, t. viii.

substance is really diffuent, and its component particles have lost all their organic texture and relation. Whatever affinity there may be in the pathological causes of these two states, they are distinguishable in appearance and different in results.

The consistence of the white substance is generally normal or natural; in some few instances, as above hinted, it is harder than usual in the convolutions.

Besides the appearances resulting from high vascular injection, there is a discoloration of the grey substance which is a peculiar phenomenon. This appearance has been observed by M. Lallemand. It is attributed by M. Calmeil, as connected with general paralysis, to inflammation of the cortical substance, which he considers as the proximate cause of the disease.

7. This inflammation extends, as it would appear, to the ventricles, as the rugous or roughened state of the internal membrane, owing to subjacent villousities, indicates. These villousities and the membrane itself are often of a bright red colour. The appearance of inflammation is generally more marked in the fourth than in the lateral ventricles.

8. Local and particular lesions in the substance of the brain, such as apoplectic cysts, and likewise partial ramollissement, sometimes found in the medulla spinalis, are considered by M. Calmeil as merely accidental, and peculiar to the occasional disorders complicated, in particular instances, with general paralysis.

The conclusions resulting from these observations are very clearly deduced and expressed by the author. He says—

‘The changes discovered in the heads of persons who have perished under general paralysis, viz. injection and absorption of the bony structure; injections of the dura mater; separation of its fibres; effusions of serosity into the cavity of the arachnoid; false membranes, organized or without organization; cysts filled with blood between its two laminæ; simple hemorrhages in the arachnoid; œdema of the meninges; injections and thickenings of the membranes; vegetations of the pia mater; development of their vessels; adhesions between the pia mater and the convolutions; disappearance of the grey substance; softening, hardening, and discoloration of the same substance; consistence and injection of the white substance; redness and tumefaction of the ventricular villousities; serosity in the ventricles, apoplectic cysts, erosions of the convolutions; ramollissement of the brain or of the spinal marrow;—these phenomena do not sufficiently explain the symptoms observed during life. The changes enumerated are so various in their appearance, and so far from uniform in occurrence, that they cannot on this account be immediately connected with the results.’ M. Calmeil considers them all to be evidences of inflammation. This he infers to be the identical state of the brain, *of which the several appearances are diversified signs*, only varied manifestations of one and the same disease. ‘Nearly all these disorders,’ as he says, indicate a chronic phlegmasia in the brain, producing an identical modification, of which *the morbid appearances are only symptoms.*” * 219.

In this last conclusion of M. Calmeil—namely, that the post-mortem changes are effects, and not causes, we entirely agree with M. Calmeil.

Our author then gives us the observations which Foville has made on the morbid changes in the brain and membranes, for the particulars of which we must refer to the volume itself. His two principal inferences, however, we may adduce.

“1st. Morbid changes in the cortical substance are directly connected with intellectual derangement.

* Calmeil, p. 416.

2d. Morbid changes in the white substance are directly connected with disorders in the motive powers." 226.

In the second section of this chapter, Dr. P. examines into the state of the lungs in insanity. In 168 cases of melancholic derangement, M. Esquirol found only two instances of diseases of the liver, while there were 65 of disease of the lungs. The same writer has computed that, in two cases out of eight of mental alienation, there will be found some disease of the thoracic viscera. In respect to the first computation, we may observe that, throwing insanity overboard, there will be found 65 cases of pulmonary disease for two cases of *disease* of the liver. So of the second computation—if one fourth of the human species die of consumption, are we not likely to find two cases in eight of pulmonary disease after death, whether the patient die with the symptoms of insanity or not? This section is sheer nonsense—and the same, indeed, may be said of several other sections that follow. The probability is, that affections of the abdominal viscera, especially of the stomach, intestines, and liver, are far more frequently connected, in the light of causation, with insanity, than any other diseases of remote parts. But still *these* would not produce insanity, unless the brain or its membranes become involved—consequently, they could only be looked upon as predisposing the organ of the mind to disease. The following passage is the most sensible in these sections.

"The rare occurrence of organic diseases of the liver in cases of mental derangement is no proof, as M. Guislain has remarked, that pathologists have been always in error when they have conjectured or inferred from circumstances, that the functions of the same organ have been in a disordered state, and even that such disorder has had a considerable share in evolving the train of morbid phenomena which refer to the mind." 233.

The sixth chapter is on the theory or pathology of mental derangement; and the opinions of various writers are examined. In this, and, indeed, in all countries, the popular opinion is, that insanity is a malady of the mind itself, and that it may exist independently of any corporeal disorder. Such opinion is entertained even by some professional men on the Continent; but it is totally abandoned in England and France by all enlightened physicians. We have already hinted our own conviction, that insanity depends on corporeal disorder—the immediate seat of that disorder or disease being in the brain or its membranes. That the cerebral disorder may be produced by visceral disorders at a distance, we can have no doubt. The inflammation of a compound fracture will often produce delirium—and we know that dyspepsia will produce hypochondriasis—but still, in the one case and in the other, the immediate seat of the delirium and of the hypochondriasis is in the head. The nature of the cerebral affection, giving rise to insanity, is not so well ascertained as the seat of the complaint. Dr. P. seems inclined, on the whole, to consider it as allied to, if not actual inflammation. We are disposed to think, that *irritation* has often more to do in the pathology of insanity than *inflammation*. We do not deny, however, that the *latter* does not frequently co-exist with, or supervene on, the *former*. This brings us to the 7th chapter, on—

TREATMENT OF INSANITY.

Our author follows the usual division, into moral and medicinal treatment of the insane, beginning with the medicinal, which consists of two indications, viz.—1st, to remove or lessen the diseased condition of the brain, on which insanity depends—and, 2dly, to restore and maintain a healthy condition of the physical or natural functions, and to obviate or remove disorders in other parts of the system connected with, or consequent on, diseased condition of the brain—in other words, chronic insanity, as contrasted with the acute stage.

First Indication. Our readers are prepared for the general tenor of treatment in the first stage of insanity, when inflammatory action, or vascular excitement, is taken as the proximate cause of the disease. The following qualifying cause is deserving of record.

“From the fact that the proximate cause of madness is nearly allied to inflammation, it does not follow, with certainty, that the disease is to be cured by the simple use of antiphlogistic remedies. The physician who would proceed to treat cases of madness as instances simply of inflammation in the brain, and who would expect to cure it at once, like any other local inflammatory disease, by the direct operation of antiphlogistic means, would very often find himself greatly disappointed. He would meet with many cases in which no perceptible benefit arises from bleedings, and evacuations of all kinds generally or locally applied, and combined with the whole series of remedies supposed to be required by the existence of organic inflammation. Many patients would sink under such a course of treatment, if carried on incautiously: it would leave the disease undiminished, and exhaust the powers of life. This depends, perhaps, on the influence of diseased states in other structures and organs, or on disordered functions of other parts which are complicated with, and in some instances give rise to, the disturbance existing in the brain. Inflammatory excitement is a part of the disease, but does not entirely constitute it.” 252.

We are ready to admit, however, with Dr. Prichard, that there are few cases of insanity, where the practical indication arising from this view of the pathology will not be found applicable during some period of the malady—more especially in recent invasions of a violent nature, and where the patient is young and vigorous, with the usual symptoms of vascular excitement. The opinions of various authors are next adduced, as to the different items of the antiphlogistic treatment. Dr. Cullen advocated *bleeding*, to which PINEL was opposed, considering the signs of vascular plethora in the head as very deceptive, and, when acted on, as generally productive of mischief instead of benefit. Esquirol coincides with Pinel.

“He says that he has seen madness increased after an abundant flow of the catamenia, and likewise after one, two, or three bloodlettings. In such cases, melancholy dejection has passed into furious madness. Yet M. Esquirol approves of moderate bleeding in plethoric cases, and where some habitual sanguineous evacuation has been suppressed. He has often with advantage applied leeches behind the head or to the temples of patients who are subject to sudden determinations of blood towards the head. His favourite remedies in such cases were the use of a few leeches at a time, repeated as often as necessary, and cold applications to the head.” 254.

Dr. Haslam advocates bleeding as the most beneficial remedy in insanity—being equally efficacious in melancholic as in maniacal cases. “He li-

mits its use to recent cases and plethoric habits, and directs it to be performed by the application of six or eight cupping glasses to the shaven scalp. From eight to sixteen ounces may be drawn, and the operation repeated as circumstances may require." Our readers will perceive that these limitations to "recent cases and plethoric subjects," reduce the measure of very mediocre pretensions. Dr. Rush, of Philadelphia, carried venesection to a great height; but his example will not be followed in this country. All his measures were of a most vigorous character; and, being applied to subjects of the new world, in a warm climate, and under moral and physical circumstances considerably different from those in the old hemisphere, they can hardly be adduced as models for imitation at present. From a patient, 68 years of age, he caused 200 ounces of blood to be drawn in less than two months. Foville steers a middle course.

"In the greatest number of cases of recent insanity which have been placed under my care, I have employed evacuations of blood, local or general, rare or frequent, abundant or in moderation, according to the strength of the patient, and the state of the pulse, the redness of the eyes, the heat of the head, the agitation and want of sleep." 257.

Dr. P. himself was led to adopt the practice of Foville, long before he heard of that gentleman's sentiments. He condemns, however, the inordinate detractions of blood recommended by Dr. Rush. The indications for phlebotomy in mental derangement, are those which point out an approach to phrenitis.

"I have stated my opinion on the subject of bleeding with the confidence which appears to myself to be the result of long and repeated experience of its beneficial effect; but I must not omit to remark that, although a majority of physicians who make insanity an object of study coincide with me, unless I am greatly mistaken, in this respect, there are others who hold an opposite opinion. Among these are some who have the very best claim to the confidence of the public, namely, that of more than ordinary success in the treatment of insanity. I am informed by Mr. Hitch, that at the Gloucester Lunatic Asylum, which is under the superintendence of Dr. Shute and his own immediate care, the use of the lancet, leeches, cupping-glasses, blisters, drastic purgatives, the practice of shaving the head, are totally proscribed. Yet among the patients admitted to this hospital, a very large proportion of recoveries, as I have already observed, take place, and *no cases* of sudden apoplexy or hemiplegia have yet happened." 261.

The above is worth alluding to.

The abstraction of heat from the head by evaporating lotions will generally be found useful in almost all cases of mania, especially where there is much excitement or violence. Affusion of cold water on the head has been recommended strongly by many experienced practitioners.

"A method of bathing adopted by M. Foville in the hospital under his management is free from the inconveniences and occasionally injurious results attendant on cold affusions. He places a cap or bonnet, containing ice and closely fitting, on the head of the patient, and keeps the body immersed in a warm-bath for two or three hours, and renews this proceeding twice or three times in a day, according to the intensity of symptoms. On adopting it, as he was accustomed to do at first, only once in a day, he found the tranquility produced by it followed not unfrequently by increased agitation; but on repeating

the bath, with the ice constantly applied to the head, he has frequently succeeded far beyond his expectation." 263.

On the remedial processes of counter-irritation, some useful but common remarks are made, and then **PURGATION** is introduced. From the earliest records of medicine—witness the celebrity of Antecyra and Hellebore—purgation has held a high place in the treatment of insanity. Some caution is necessary in the administration of purgatives, since the mucous membrane of the intestinal canal is sometimes in a state of irritation or inflammation, during the existence of insanity. Emetics were once universally employed in insanity—and indeed in almost every disease. They are now comparatively in desuetude. Nauseating doses of antimony, however, are often of great service. Digitalis is still employed by some practitioners, especially where there is much arterial action. It is a remedy on which little dependence can be placed.

"Opium is far from being a remedy generally admissible in cases of insanity; yet there are instances in which it is decidedly useful. Its adoption requires care and discrimination. We are not possessed of any precise rules by which the effects which may arise from it can be with certainty predicted." 269.

Hyosciamus is safer; but a less effectual sedative, where sedatives are actually indicated. Camphor has been much vaunted by Hufeland and some other physicians, but is now generally considered as inefficient. Stramonium and balladonna are not entitled to much confidence. A mild alterative course of mercury continued till the gums are effected, is an important measure, considering how often the disease is connected with disordered condition of the liver and other glandular organs.

Rotatory Motion. The suggestion of rotatory motion, with the view of reducing the force of the circulation by occasioning nausea and faintness, has been traced to the time of Cælius Aurelianus. Darwin, in modern times, made the proposal—and Dr. Cox brought it into actual practice. In La Charité it is used at this day, as also in some parts of Germany. The effects of it are analogous to those of sea-sickness, and consequently are of a very sedative nature. Those who have given it a "fair trial," speak favourably of the remedy. The rotatory swing is useful in a moral point of view. Its effects are so disagreeable that patients dread it, and this dread may often act as a curb on their passions and impetuosities.

In respect to medical treatment, our author observes that it must be chiefly applicable to the acute stage and the early period of insanity. In subsequent periods, the marks of previous determination to the head will have generally subsided, giving way to an opposite condition—one of atony or relaxation, bordering on serious effusion, or approaching to various other changes implying the consequences rather than the causes of the malady. The treatment, then, of the early stage, being antiphlogistic, that of the later periods is "to restore and maintain a healthy condition of the physical or natural functions—and to obviate or remove disorders in other parts of the system."

"The relation in which these diseases stand to the cerebral disorder may be doubtful in many instances; in some it is the relation of cause, in others that of effect; even in the last instance there is a reaction of the secondary upon the primary parts in the series of morbid changes, and the original disease is aggravated by its complication with an accessory one." 275.

We need not advert to the various means of correcting various disorders of different organs. These will suggest themselves to every practitioner of any experience—and these are those who compose the bulk of our readers.

The Second Section of this Chapter is on “**MORAL TREATMENT.**”

It is hardly necessary to remark, in limine, that the state of individuals, in the several forms and varieties of insanity, differs so much as to baffle all attempts at laying down fixed rules for their moral treatment.

“Maniacs, for example, who are under strong excitement, during paroxysms of raving madness, require personal coercion and even strict confinement of body and limbs in order to prevent mischief to themselves and others. Such treatment would be quite improper for other classes of lunatics, or even for the same individuals at different periods.” 279.

Our author endeavours to arrange his observations on the “**MORAL TREATMENT**” of insanity under the following heads.

“1. Of the propriety of secluding or confining the insane, and separating them from society.

“2. Of other means of abstracting them from the morbid impressions and associations which may have excited and may foster their mental disease.

3. Of the moral discipline and personal control under which they ought to be placed.

4. Of the treatment of their understandings in relation to their illusions or the morbid impressions on their minds.” 280.

The first head—that of **SECLUSION**, is treated of in this section, only as regards the recovery of the patient, and not in a medico-legal point of view. From long attention to, and observation of the effects of seclusion—or rather of isolation, in mental derangement, we are quite convinced that the cases where the said isolation is improper, form only a very few exceptions to the general rule. If a father, brother, or son were affected with this mental malady, we should not hesitate one moment in placing him in a proper lunatic asylum—and that not to diminish our risk or trouble, but for the sake of promoting the recovery of the patient.

False lenity in such cases is real cruelty. But the arguments are so well put in the following extract, that we shall place it in our pages, as a ready reference to shew to the friends of patients, when they are in doubt what course to pursue.

“M. Esquirol has observed that all English, French, and German physicians, who have devoted themselves to the study of mental diseases, recommend the confinement of the insane, and are unanimous as to the utility of this proceeding as means of cure.

Cullen has pointed out the necessity of confining lunatics, and separating them from their relations and friends. Willis, who acquired so great celebrity by having assisted towards the happy termination of the first attack of madness experienced by George III., unfurnished the king's apartments, dismissed his courtiers and domestics, and had him attended by strange servants. Willis asserts that insane persons from the continent, who came to seek his advice, got well more frequently than his countrymen.

‘M. Pinel, in his treatise on Madness, his best title to the admiration and gratitude of mankind, has pronounced seclusion to be the foundation of all rational treatment of mental diseases.’

We here find this statement made in very general terms; whether any and what limitations are required or were intended will be apparent, when we shall

have considered the reasons which have been assigned for having recourse to such a proceeding.

The reasons which indicate the necessity of secluding and confining insane persons are briefly stated by M. Esquirol in the following heads.

1. The insane ought to be confined for their own security, for that of their families, and for the maintenance of public order. This consideration is not within the scope of our present inquiry.

2. To remove them from the influence of external circumstances which may have produced their disorder, and may be likely to protract it.

3. To overcome their resistance to curative means.

4. To subject them to a regimen appropriate to their situation. And

5. To cause them to resume their moral and intellectual habits.

That the second of these objects, which is the foundation of all curative proceedings, can only be obtained by withdrawing insane patients from their homes, and secluding them from their families and society, becomes apparent on considering the prevalent state of the feelings and affections of lunatics, and the results arising from the erroneous impressions which cloud their understandings.

'The sensibility of the insane,' says M. Esquirol, 'is perverted: they no longer have any relations with the external world but those of a disordered and consequently painful nature. Every thing irritates them, distracts them, and excites their aversion. In constant opposition to all that surrounds them, they soon persuade themselves that persons are combined to injure them; and neither understanding what is said, nor being able to comprehend the reasonings that are addressed to them, they misinterpret the most affectionate expressions and the wisest councils; they mistake the most candid, serious, and tender language for insults, irony, and provocations, and the most attentive kindness for contradictions. The regimen and the prohibitions which are called for by their situation, and to which their attendants wish to subject them, appear to them cruel persecutions.

'The heart of the insane cherishes no feeling but mistrust; he is irritated to anger by every thing he sees, and is so timid and fearful that he is troubled as soon as any one approaches him. Hence arises the conviction that every one tries to vex, defame, ruin, and destroy him. This conviction puts the finishing stroke to the moral perversion of his mind, and from it arises that symptomatic mistrust, which is observed in all the insane, even in maniacs who appear so bold and audacious.

'From mistrust these patients soon pass to fear or hatred; and in these new moral situations they repel their relations and friends, and welcome strangers, throwing themselves into their arms, calling them their protectors or liberators, with whom they are ready to fly, and abandon their home and family.

'With these moral dispositions, if left in the bosom of his family, the tender son, whose happiness used to consist in living near his mother, and in following his father's counsels, persuaded that they wish to disgust him with his home in order to drive him from it, falls into the deepest despair, or escapes to destroy himself.' 'Another unhappy person becomes, all at once, lord of the world, dictates his sovereign commands to all that surround him; he expects to be blindly obeyed by all those who have been accustomed to yield to his will through respect or affection. His wife, his children, his friends, his servants, are his subjects; they have hitherto always submitted to his will: how dare they resist him now? He is in his own territory; his commands are despotic; he is ready to punish with the greatest severity whoever shall make the least remonstrance. What he requires may be impossible—that is of no consequence: should the commands of the all-powerful meet with obstacles? The affliction of his family, the chagrin of his friends, the anxiety of all, their deference to his will and caprices, and the repugnance that each evinces to oppose him from the fear of exasperating his fury, contribute to confirm him in his imaginary possession of

power and dominion. Withdraw him from his pretensions, transport him far from his house, from his empire,—removed from his subjects, surrounded by new scenes he will collect his ideas, direct his attention to himself, and place himself on an equality with his companions.” 283.

The preceding observations will be found applicable perhaps to all maniacs—and even to many of those who are monomaniacal. In mania, or raving madness, strict confinement is obviously required. And in most cases of monomania the understanding is so disturbed, and the moral affections so perverted, that no alternative is left but isolation. When the disorder of the understanding is so restricted as to leave the patient the exercise of a great portion of his reason, the case is more difficult of adjudication. It seems cruel to deprive him of the attention of his family, and separate a miserable being from the objects of his affections. M. Esquirol candidly admits that isolation is not invariably useful in these cases.

“When the predominant feelings of the monomaniac are such as are calculated to estrange him from and to set him at enmity with his relatives; when he is actuated by pride and misanthropy, by jealousy, hatred, malice, confinement is absolutely necessary. If, on the contrary, the illusion of the insane relates to objects of indifference, and excites no strong emotions; if he has no aversion to his home and the persons with whom he lives, although confinement may be sometimes useful, it is not absolutely necessary. ‘But if the patient, retaining a large portion of his intellect, has a strong attachment to his relatives, it is to be feared that confinement might aggravate the disease.’” 288.

The risk of suicide which is constantly run in cases even of monomania, is a great inducement to place the individual in security. Many a horrifying scene of this kind would be prevented by timely isolation. A troublesome description of patients are those where mental derangement follows inebriation. When placed in an asylum and deprived of drink, they soon recover. They demand their liberty—return to their old habits—and an aggravated attack of insanity is usually the consequence. Confinement, in such cases, would be the surest prophylactic, but in this country, it could not be put in force.

The period at which the insane should be liberated is often very difficultly determined. Great care is necessary not to dismiss the insane too soon, as they often exhibit considerable art in disguising their real condition. Even when recovery is complete, a strong predisposition to relapse exists—which relapse is readily induced by any sudden excitement, intemperance, or gust of passion.

“M. Pinel has given some important remarks on this subject, which I shall briefly abstract. He observes that any sudden alarm, transport of anger, or of grief; that intemperance, hot weather, or even a sudden change from a state of confinement and constraint to liberty, is liable to produce in convalescent lunatics a disturbance of which they would not be susceptible in other circumstances, and to renew the attacks of mania when the habit has not been long suspended: that some convalescent patients, who have been taken away too soon by their friends have suffered relapses, and have been obliged to return several times to the hospitals. A grenadier of the French guards, who was one of the foremost to mount the Bastille at its assault, gave himself up to the most unbounded ambition, was disappointed in his brilliant expectations, and fell into the most violent maniacal delirium. He remained four months in this state of fury and confusion after his arrival at Bicêtre. When he became calm, his mother took him away before his reason was confirmed; hence he experienced a return of

his attacks in the midst of his family, and it became necessary to remove him again to the hospital. The same imprudence was renewed twice with the same results. His mother, then instructed by experience, was no longer anxious to remove him unseasonably: he passed two years tranquilly and without any attack, left the hospital at the beginning of the winter, and never again experienced a return of his disease." 291.

This part of the work concludes with some general observations on exercise, and on some other points of moral management not included in the preceding chapters. Here we must terminate our analysis. There are three or four more chapters in the work, occupying about 180 pages, on puerperal mania, idiotism, statistics of insanity, medical jurisprudence as it relates to insanity, gestatic affections—and supplementary notes on phrenology, the forms of skulls, and the functions of the brain. Some of these subjects we may take up in another article, as they are not necessarily connected with the present subject, as far as an analytical review of the book is concerned.

The copious account which we have here presented of Dr. Prichard's work renders any summary opinion of it unnecessary. It is a laborious and judicious compilation, containing, perhaps, as much original matter as was necessary or beneficial in a production of this kind. The author is entitled to great respect for his opinions, not only because he is well known as a man of extensive erudition, but also on account of his practical acquaintance with the subject on which he writes. The work, we may safely say, is the best, as well as the latest, on mental derangement in the English language.

WORKS ON PATHOLOGICAL ANATOMY.

1. *ILLUSTRATIONS OF THE ELEMENTARY FORMS OF DISEASE.* By *Robert Carswell*, M.D. Professor of Pathological Anatomy in the University of London, &c. Fasciculus Seventh—Mortification. Four coloured Lithographic Plates.
2. *ANATOMIE PATHOLOGIQUE DU CORPS HUMAIN, &c.* Par *J. Cruveilhier*. *Maladies du Fœtus.* Livraisons XV., XVI., XVII., XIX.

WE do not associate these works, because there is any natural connexion between mortification and the various diseases of the fœtus, but simply because they are both in process of publication at present, and both deserve to be brought before the profession. Of pathological anatomy we have spoken so often, and said so much, that it would be worse than tautology to utter another word upon the subject. But taking the view we do of the value of an extensive acquaintance with its facts, we feel ourselves compelled to allow no opportunity of laying them before our readers to escape us.

We shall first present an account of the fasciculus of Dr. Carswell. It is dedicated to the subject of Mortification, which is handled with much vigour and precision.

Dr. C. first points out the ordinary distinctions, as known and adopted in this country, between gangrene and sphacelus—dry and humid gangrene,

and *grangrena senilis*—and so on. But he treats, in the fasciculus before us, of those states only which are usually comprehended under the term mortification. The several kinds of mortification he arranges under the three following heads:

1. Mortification from cessation of the circulation.
2. Mortification from the violent operation of mechanical, chemical, and physical agents.
3. Mortification from the deleterious influence of certain poisons.

For nosological arrangements of this sort we have usually but small respect. For all that they can do, is to furnish a more convenient method of expressing a certain number of facts, and, provided that they do this, their systematic merits or demerits may be disregarded. But to proceed. The first division is—

MORTIFICATION FROM CESSATION OF THE CIRCULATION.

Cessation of the circulation, says Dr. Carswell, in a part of the body may be produced,—1st, by inflammation; 2d, by mechanical causes, which obstruct the passage of the blood; and, 3d, by local or general debility.

1. *Mortification from inflammation.* Mortification may occur as a result of inflammation in any tissue or organ of the body. The following sentiments require, perhaps, some consideration, before we can yield them implicit consent.

“Mortification is, however, much more frequently observed in those organs in which the vascular system predominates, or in which an inordinate accumulation of blood is readily produced, on account of their greater sensibility and their direct exposure to the influence of those causes which give rise to inflammation. Hence the reason why gangrene and sphacelus occur more frequently in the skin and cellular tissue, mucous membranes, and lungs, than in the other tissues and organs of the body, as immediate effects of inflammation; and why they are so rarely observed in serous and fibrous tissues, which contain few or no blood vessels. Not only is mortification rarely observed in these latter tissues, but it may also be said never to occur in them as an immediate effect of inflammation, for they are never found in a state of gangrene or sphacelus, unless the cellular tissue with which they are in contact, and from whose vascular system their nutrition is derived, has previously been diseased. Such also is the case in caries (death of bone,) as a consequence of inflammation of the periosteum and medullary membrane.

These circumstances enable us to explain why, in many cases, mortification takes place in one tissue, and not in another, although the inflammation by which it is preceded is the same in kind, degree, and duration. There are, however, many other circumstances of perhaps still greater importance, the single or conjoint operation of which favours, in a most remarkable manner, the termination of inflammation in gangrene and sphacelus: such as a state of chronic inflammation of a portion of an organ accompanied by induration and obstructed circulation; a state of local congestion, depending on the presence of an obstacle to the return of the venous blood: that state of general debility which prevails at the termination of protracted fevers, or during the first period of convalescence; and a morbid condition of the blood, such, for example, as that which occurs in scorbutus.”

We do not think that the preceding observations are strictly accurate,

Dr. Carswell appears to insist on the pathological principle, that the greater the vascularity of a tissue, the greater the disposition to mortification. Now let us take the case of the cellular tissue and the skin. The vascularity of the former is certainly much less than that of the latter, yet its proneness to mortification is infinitely greater. We observe this in a remarkable degree in cases of diffuse inflammation of the subcutaneous cellular tissue after injuries. That tissue inflames and sloughs, while the skin (almost equally involved in the affection) continues to retain its vitality. In other cases, we see the inter-muscular cellular texture in a state of mortification, while the muscles, almost insulated by sloughs, are still alive. Now the cellular tissue is by no means vascular, yet it, of all others, is most prone to mortification. We might dwell more at length upon this subject, and adduce some further illustrations of the fact, that textures indifferently supplied with blood are very liable to inflammation and sloughing. General principles should always be considered with extreme circumspection before they are laid down, and received with much suspicion when they are proposed. But to proceed. Dr. Carswell next describes the general phenomena of gangrene and sphacelus, the more remarkable changes which take place in the circulation, innervation, temperature, colour, and consistence of the parts affected. These are best observed, and are consequently best described, as they appear in the skin and subjacent textures. Yet Dr. Carswell does and can do no more than offer the usual epitome of the characters of mortification, contained in lectures and works of an elementary description. Such an epitome we may usefully omit, and pass to his remarks on Mortification of particular Tissues from Inflammation.

Mortification of the cellular tissue is considered first, and a knowledge of the characters and progress of this affection is highly important, indeed necessary to the surgeon. The cellular tissue, as we have already said, is, perhaps, more frequently the seat of mortification than any other texture, and displays the effects of that destructive process, in cases of "erysipelas phlegmonodes," on an extensive scale. As an acquaintance with the pathology of this frequent and very formidable malady is a matter of some consequence, we shall pause to consider it at some little length. Let us first introduce Dr. Carswell's description of the condition of a limb affected with the disease.

"When we examine a limb in which erysipelas phlegmonodes has gone through its several stages, we find that, in the first stage, the cellular tissue situated most remote from the original seat of the disease, is discoloured by the presence of minute vessels distended with dark blood, and contains a considerable quantity of serosity, which is sometimes nearly limpid. As we proceed nearer to the original seat of the inflammation, the quantity of the effused fluids increase to such a degree that the cellular tissue in which they are contained appears, from the great augmentation which has taken place in its bulk, to form the greater part of the limb. In this state it feels hard, but when pressed between the fingers it is readily broken down into small fragments, from which there oozes out in great abundance a sero-purulent, purulent, and sanguineous fluid. This state of the cellular tissue may be regarded as constituting the second stage of the disease, or state of gangrene. When we arrive at the original seat of the inflammation, none of the physical characters of this pathological state are to be seen. The congestion has disappeared, the blood has been transformed into pus, and the cellular tissue and bloodvessels, converted into a soft spongy substance of various colours, are partly detached in irregular masses, and float in the putrid contents of a ragged excavation. Under these latter cir-

cumstances, the muscles, tendons, large bloodvessels, and nerves are often laid bare to a great extent.

Such are the morbid appearances presented by the cellular tissue in fatal cases of erysipelas phlegmonodes, the primary and almost exclusive seat of which is this tissue. They would seem to prove that the rapidly destructive effects of this form of inflammation depend in great measure on the mechanical influence exercised by the effused fluids on the capillary circulation. These fluids must compress the neighbouring veins to a degree that will prevent the return of the blood poured into the capillaries; the function of nutrition must then cease to be accomplished, as is proved by the great diminution of cohesion which is observed to have taken place in the cellular tissue in the second stage of the disease; and as there is no tendency towards the formation of coagulable lymph, by the presence of which alone the inflammatory congestion can be arrested, the state of gangrene which this stage indicates must necessarily terminate in sphacelus. It is indeed well known that free mechanical division of the skin and cellular tissue, especially in the first stage of the disease, is the most effectual means that can be employed to arrest its progress,—a mode of treatment, the obvious effect of which is to remove to a greater or less extent the distention of these tissues, and the mechanical cause by which it is produced.”

We have paid some attention to the phenomena of diffuse inflammation of the cellular tissue, and we have carefully dissected limbs in which it has prevailed. We agree with Dr. Carswell, in his description of its pathological characters, and we also agree with him in the opinion, that mortification of the tissue is, in some measure, the result of mechanical agency—of the pressure exerted by the effused serum, lymph, and pus. Examination discloses the successive phases of this destructive inflammation—first, increased vascularity of their texture—then effusion of reddish or of yellow serum—then deposition of lymph and pus—and, finally, the cells being distended with these secretions, sloughing and death to an immense extent. The affection of the cutis is secondary in importance, if not consecutive in point of time, to that of the cellular tissue beneath it; and early incisions will relieve the tension of the skin and will often save it, even when performed at a comparatively late period.

It is difficult to determine what precise cause operates, to favour the extension of this inflammation of the cellular tissue—why, in fact, it is diffuse, instead of being circumscribed by the effusion of coagulable lymph. Whatever that cause may really be, it is certain that diffuse inflammation is most prevalent in persons whose constitutions are impaired, and in situations which are not adapted for maintaining a high state of bodily health. Thus, debauched and drunken persons are particularly prone to diffuse inflammation after injuries, and the inhabitants of large cities, and more particularly hospital patients, are more frequently affected than individuals breathing the pure air of the country, or even than patients in private life.

As our object is the pathology, we shall not enter on the symptoms of diffuse inflammation of the cellular tissue—symptoms which consist essentially in local and external characters. But we are anxious to direct the attention of our readers to the fact, that serious and irremediable mischief is extending or has occurred in the cellular texture, at a time when the skin displays little more than dull red discoloration. Woe to the unhappy patient who is under the care of a surgeon unacquainted with the nature of the disease. Early incisions afford the only chance of safety or recovery.

Carbuncle and boil afford examples of another form of cellular inflam-

mation, terminating in mortification. The only essential difference is this—that, in those affections, the inflammation and sloughing are circumscribed, whilst, in the form to which we have referred so fully, it is diffused, and displays no disposition to be bounded by what is denominated the adhesive process. Yet, in carbuncle and boil, we observe an illustration of the important principle—that the cellular tissue dies sooner than the skin, and that early and free division of the latter checks or arrests the process of mortification in both.

In cynanche parotidæa, or mumps, as Dr. Carswell properly remarks, the cellular tissue of the salivary glands is very similarly situated as in carbuncle. It is this tissue which is the seat of the inflammation, congestion, and effusion; but being prevented by the unyielding nature of the glandular tissue of the organ from accommodatng itself to the increased quantity of the fluids poured into it, it soon sloughs, sometimes before the glandular tissue has undergone any remarkable change of colour or consistence, and even before suppuration has commenced.

Dr. Carswell does not notice, and probably he is unacquainted with, a rare, but a very fatal form of inflammation of the cellular tissue. It is diffuse inflammation of that division of the tissue which passes between the muscles and into the deeper parts of the body. We have seen three or four instances of this. The cases terminated fatally, and the cellular tissue, in the situations we have mentioned, displayed the same pathological characters described as affecting the cellular tissue beneath the skin.

The submucous cellular tissue is subject to diffuse and circumscribed inflammation, though this seldom proceeds to any great extent.

“The *diffuse* form of the disease is rarely observed except in the pharynx and larynx, either as a primary affection, or in conjunction with erysipelas phlegmonodes of the arms, face, or neck. In these situations, the sloughing of the submucous tissue is very limited, and always accompanied by a corresponding state of the mucous membrane which covers it. The effusions of albuminous and puriform fluids which take place at the same time, occasion a great increase of bulk, produce dysphagia, great difficulty of breathing, or complete asphyxia. Hence the frequently fatal termination of the disease before it has passed into gangrene or sphacelus, and which has sometimes been described under the name of serous, albuminous, and purulent œdema of these parts.

The *circumscribed* form of inflammation of the submucous tissue terminating in gangrene and sphacelus seldom occurs as a primary affection. It follows, in general, inflammation of the mucous membrane, but may afterwards proceed to a considerable extent and occasion sloughing of all the other tissues of the organ in which it occurs, but more especially those of the intestinal tube: such is a frequent cause of intestinal perforation, and the fatal peritonitis by which it is followed.”

Diffuse inflammation of the cellular tissue external to the mucous membrane of the larynx and the pharynx, deserves more than a passing notice. It is not unfrequent, extremely insidious, and too generally fatal. The patient appears, and is commonly considered, to be labouring under a common sore throat: no alarm is felt, and, much to the surprise of the friends and the physician, grave symptoms of laryngitis unexpectedly set in, and speedily carry off the individual. On examination after death, lymph and pus are found effused into the cellular texture, external to the mucous membrane of the pharynx and the larynx, and similar depositions usually extend into

that intervening between the muscles, and even into the general cellular tissue of the neck. We have seen pus effused, in cases of this sort, into the cellular texture external to the œsophagus, and stretching with that tube down the posterior mediastinum to the chest. The patient commonly dies in this, as in other cases of deep-seated suppuration, with symptoms of a typhoid character; and, occasionally, secondary inflammation of the pleura is established immediately before, and accelerates the fatal termination.

"Gangrene and sphacelus of the *subserous* cellular tissue are seldom observed as a consequence of inflammation; but the former state has more often been met with than the latter, and principally in the sub-peritoneal cellular tissue. The great facility with which this tissue is torn in some cases of acute peritonitis, its pulpy softness in some points, and occasionally a certain degree of fœtor, are circumstances which indicate a near approach to, if not an actual state of, gangrene. In the cavity of the pelvis, and in the iliac and lumbar regions, these appearances are more marked and more easily detected. Not only gangrene but sphacelus of the cellular tissue is occasionally found in these regions in consequence of the extension of inflammation induced more especially by chronic and acute affections of the uterus, rectum, and kidneys."

We have seen an example of diffuse inflammation of the cellular tissue intervening between the muscular and serous tunic of the bowels. It occupied nearly the whole length of the intestinal tube, and originated in the vicinity of an ulcer of the rectum, which extended to the muscular coat of the bowel, and which had been irritated by a surgical examination. Inflammation of the cellular tissue immediately external to the peritoneum is a frequent cause of death after lithotomy. For remarks upon this subject we must direct attention to some late numbers of this Journal.

Mortification of the *mucous membranes*, in consequence of inflammation, is not so frequent as was formerly supposed, the older pathologists confounding with it congestion, melanosis, and so forth. Dr. Carswell observes that the mucous membrane of the throat and intestines is more frequently the seat of this disease than that of any other organ. In the former it is occasionally met with to a limited extent in cynanche tonsillarum and pharyngea, and constitutes the distinctive anatomical character of synanche maligna or angina gangrenosa. In the latter, it follows as a consequence of certain forms of acute enteritis, either when the inflammation affects the mucous tissue itself, its follicular structure, or both at the same time. In either of these situations the mucous and follicular textures are primarily affected, and may be converted into sloughs of considerable extent without the submucous tissue being destroyed. When thus deprived of their vitality, these textures are, at first, of an ash-grey or straw-colour, and may afterwards become brown or black. They are, however, frequently of the colour of the matter with which they are in contact, the fluid part of which is readily imbibed by the soft spongy tissue of the slough. The mucous membrane which surrounds the slough is generally gorged with blood, indicating either a state of great congestion, or gangrene. When, however, the gangrenous inflammation is confined to the glandulæ agminatæ, and when the greater part or the whole of the follicular structure has sloughed, little congestion or inflammatory redness may remain. In this, as in all other cases of the disease, the existence of sphacelus must be determined by the positive signs of colour, consistence, and smell, supported by the negative evi-

dence arising from the absence of any other cause capable of producing such a condition.

Gangrenous inflammation of the mucous membrane of the air-passages, and of the genital and urinary organs is not frequent. In the former it is seldom seen except as a consequence of the extension of a similar disease of the pulmonary tissue, or of the internal surface of tubercular excavations. In the latter, it is principally the result of the direct operation of mechanical causes, such as calculi contained in the bladder and kidneys, the improper use of instruments, pressure on the head of the child, and so forth.

"The physical characters of gangrene and sphacelus of the mucous membrane of the urinary organs in particular, differ in some respects from those presented by similar states of the respiratory or digestive mucous membrane. Mortification of the mucous membrane of the bladder occurs under two forms, the diffuse and circumscribed. In the former the congestive stage is extreme, and often accompanied by hemorrhage, which gives to the mucous membrane a uniform deep red colour. Along with this state, dark brown or black patches occupy portions of various extent of the mucous membrane, which, as well as the submucous tissue, is easily torn; and lastly, other portions of this membrane are seen partially detached and converted into a soft spongy substance having a strong gangrenous odour. In the latter, or circumscribed form of mortification of the mucous membrane of the bladder, the state of congestion is also very great, and almost always accompanied by effusion of blood, which, being confined to circumscribed portions of the submucous tissue, produces ecchymoses of various extent. The state of sphacelus is observed to take place in the centre of the ecchymoses, by the mucous membrane being converted into a soft grey or straw-coloured patch. In the mucous membrane of the pelvis of the kidney, where circumscribed gangrene and sphacelus occasionally occur, the congestive stage is marked by great vascularity, without being followed by hemorrhage—a circumstance which may be attributed to the presence of a much smaller quantity of submucous tissue, and the more intimate union between it and the mucous membrane in this situation than in the bladder."

The physical characters of mortification of the mucous membrane of the uterus, appear to Dr. Carswell to merit and require particular notice. The affection is frequently the direct consequence of acute inflammation of the mucous membrane, occurring immediately or soon after delivery. It may be confined to that portion of the surface of the uterus which gave attachment to the placenta, or it may occupy its whole extent.

"The congestive and gangrenous stage of the disease is indicated by a dark-red or deep venous colour, and occasionally by a deep blue or dirty black colour, probably produced by the chemical action of gaseous products on the blood. A similar discoloration, sometimes a greenish, or more frequently a dirty yellowish-grey colour, is observed in the stage of sphacelus, and is always accompanied by a strong gangrenous odour. The sphacelated tissues are soft, spongy, easily torn, and are generally covered with a putrilaginous fluid substance. When this substance has been washed away, the surface is rough and irregular, sometimes from the presence of the remains of the placenta, but more frequently from an exudation of fibrinous matter, which is occasionally found to cover the whole surface from the fundus to the os tincæ. The substance of the uterus is sometimes affected in this manner to a considerable depth, but it is more frequently only softened without having undergone any other remarkable change. The presence of pus in the fibrous structure of the uterus is seldom observed beyond the gangrened or sphacelated surface, but is frequently met with in the veins and lymphatics."

The *serous membranes* may mortify as well as the subserous cellular tissue. The former derive their supply of blood through the medium of the latter, and it is in consequence of that supply being cut off by alterations in the condition of the cellular tissue, that mortification of the former is produced. It is under these circumstances that sloughing of the serous membranes takes place, which is generally followed by a solution of continuity which establishes a preternatural communication between the serous cavity and that of a neighbouring hollow organ.

"The colour of the sphacelated serous membrane is generally of an ash-grey, sometimes ochrey from the presence of bile or blood. It is soft or spongy, and frequently does not present any peculiar smell. Before it separates, the sub-cellular tissue around it is frequently seen injected with fine red capillaries; occasionally, also, all the tunics of the intestine (when this is the situation of the lesion) are pale, and the accidental opening appears as if it had been made by excision. The external border, however, of the opening is smooth, although irregular, whilst on the internal surface of the intestine it is rough or ragged, or presents other marks of being ulcerated: this is the form of perforation which occurs in chronic ulceration of the *glandulæ agminatæ*."

A dark brown, dark blue, or black colour of the peritoneum, extending over a considerable portion of its surface, has been already shewn by Dr. Carswell, in his fasciculus on melanosis, to depend on causes very different from those which give rise to mortification.

The physical characters of gangrene and sphacelus of the pleura are similar to those of the same affection of the peritoneum. The most frequent cause of sphacelus of the pleura is the presense of tubercles under the membrane; and the cause next in order of frequency is gangrenous inflammation and superficial abscess of the pulmonary tissue.

Dr. Carswell observes, that gangrene and sphacelus of *fibrous membranes* in general, and *tendons*, take place in the same manner as in serous membranes. that is to say, they are observed to slough only when the cellular tissue surrounding them has previously been destroyed. In like manner also the death of *cartilage* and *bone* is effected by previous disease of the perichondrium, periosteum, or medullary membrane. We feel inclined to doubt the absolute correctness of the assertion that fibrous membranes slough *only* when the surrounding cellular tissue has been destroyed. That tissue being the medium through which the blood-vessels of those textures pass, of course its destruction will probably involve their's. But is this exclusively true? Does it necessarily follow that inflammation of the fibrous membrane itself may not end in sloughing and in death? We confess that we entertain some doubts upon the subject.

The *muscular tissue* seldom inflames and mortifies except from external injury, and in connexion with other textures.

Having thus described the physical characters of mortification in most of the simple tissues of the body, Dr. Carswell proceeds to delineate them in the compound pulmonary tissue, that in which it is most frequent, and in which its general characters are well displayed.

"When the *pulmonary tissue* is affected with gangrene, its colour becomes of a deep red, approaching almost to black, whilst its consistence equals that of hepatized lung or liver. When pressed, it breaks down between the fingers, and

there oozes out from it blood and a dirty white or greenish fluid of the consistence of milk or treacle, having a very disagreeable odour. When the state of sphacelus is produced, the pulmonary tissue, seen under the pleura, appears sunk beneath the surrounding surface, presents a dirty white, yellowish grey, brown, or greenish colour, and frequently, when extensive, a mottled aspect, in which all these tints are perceived; it feels flaccid and pulpy, and, when cut into, appears as if converted into a putrid sanies, in which shreds of pulmonary tissue and bloodvessels float or lie detached, and which diffuses around the most insupportable odour of sphacelus."

Mortification of the *pulmonary tissue* may take place in several points of the same lung at the same time, when its extent is usually limited; and it may be circumscribed, or not, by adhesive inflammation. In either case, a certain number of the bronchi are laid open, and if the patient survives for some time the broken down tissues are expectorated in the form of a dirty pulp. Occasionally also the pleura is perforated. In some cases in which the sphacelus has been arrested by the adhesive inflammation, portions of pulmonary tissue of various sizes have been found either loose, or attached by obliterated bloodvessels, and floating in the fluid contents of the excavation. Such excavations have never been observed to cicatrize, but assume an ulcerous character.

Dr. Carswell presents a full account of the state of the *vascular system* in mortification. In this, however, we see nothing to detain us. The most important circumstance is the gradual stagnation and coagulation of the blood in the bloodvessels. This characterizes the stage of gangrene, a recoverable stage; and Dr. Carswell succinctly specifies the process of recovery. When it is about to commence, circulation becomes more active all round the circumference of the affected part; the coagulated blood gradually disappears by the separation of its globules, and their transmission into the neighbouring currents; absorption is manifested by the more or less rapid removal of the effused fluids, sensation and motion return, and the part is restored to the healthy state.

In the transition of gangrene into sphacelus, and the separation of the sphacelated part, it is well known that a line of demarcation is formed by the process of ulceration. That process, it should be recollected, does not take place beyond the obliterated vessels, but the coagulation of the blood in them reaches nearer the heart than the line of separation.

"It is also to the obliteration of the bloodvessels alone that immunity from one of the most dangerous consequences of mortification, viz. hemorrhage, is to be ascribed. The presence of coagulable lymph, its organization and union with the parts into which it has been effused, constituting what is called adhesive inflammation, contributes no doubt to prevent hemorrhage during the process of separation of the dead part, or sloughing. But I am disposed to believe that it is the prevention of hemorrhage from the smaller vessels only that is secured by the adhesive inflammation, while that from the larger ones is prevented by the previous coagulation of the blood within them. That it is to the coagulation of the blood in the large vessels of a limb that we must attribute the non-occurrence of hemorrhage after sloughing, is rendered still more evident from what occurs in some cases of extensive and spreading gangrene, of the inferior extremity for example, and to arrest which it is found necessary to have recourse to amputation. The limb is removed, but the large bloodvessels yield little or no blood; they are, in fact, obliterated by firm coagula. There is no adhesive inflammation in such cases, and gangrene and sphacelus succeed to the

operation, in consequence of the vessels not having been divided above the point at which they were obliterated.

Such is the state of the bloodvessels which I have found to accompany sphacelus without hemorrhage. When on the contrary, hemorrhage occurs in this stage of mortification, these vessels are pervious and filled with fluid or imperfectly coagulated blood; and the cellular and other tissues are more or less infiltrated with serosity, sero-sanguinolent, and puriform fluids."

The second species of mortification from cessation of the circulation described by Dr. Carswell is

2, *Mortification from a Mechanical Obstacle to the Circulation of the Blood.* Mortification from this cause may depend on something preventing the access of arterial blood to a limb, or the return of venous blood from it. The first may be occasioned by ligature of the principal artery of a limb; by coagulated blood; organized or unorganized fibrine, occupying the entire caliber of such an artery or its larger branches; by ossification of the walls of these vessels, or their conversion into a solid fibrous or ligamentous tissue. On the other hand, stagnation of the venous blood may depend on obliteration of the veins caused by the pressure of tumors; by accidental products formed in their cellular sheath; by the presence of fibrine or other solid substances derived therefrom, formed within the veins, and either simply lodged within them, or more or less intimately connected with their lining membrane; and, lastly, by diseases of the heart, which greatly obstruct or prevent the return of the venous blood to this organ.

The physical characters of mortification produced by a mechanical obstacle to the venous circulation have this in common in every organ:—an excessive accumulation of blood in the venous system, trunks, branches, and capillaries of the affected part. Our author's description of this form of mortification in the lower extremities, succeeding disease of the heart, is too accurate and altogether too good to be omitted.

"The first local sign that an obstacle exists to the return of the venous blood from the inferior extremities, is manifested by the appearance of slight œdema around the ankles. The serosity gradually accumulates in those parts, spreads from thence throughout the cellular tissue beneath the skin and between the muscles; the feet, and afterwards the legs, thighs, &c. become swollen; the skin assumes a smooth and glossy aspect, feels tense, and sinks into the cellular tissue when pressed, and does not resume its former shape and situation till raised by the return of the serosity beneath it. The colour of the skin, at first natural, becomes pale and waxy, and may continue in this state during the greater part of the course of the disease. When discoloration of the skin is about to take place, it is seen to depend on the presence of subcutaneous veins, which gradually increase in bulk and number, coalesce in several points, and communicate a slightly mottled aspect to the skin, of a dull red or purple colour. On one or more of these points where the congestion is greatest, and where the skin is less yielding, as over the tibia and above the malleoli, phlyctenæ or large bullæ are formed by the effusion of serosity, either alone or mixed with blood, under the cuticle. When these burst, the cutis beneath presents a dark red or brown colour, and very soon is converted into a dirty-yellow or ash-grey slough. The separation of the slough is sometimes preceded by an increase of redness in the surrounding cutis, which, from its anatomical characters, and the increase of temperature and pain by which it is accompanied, is obviously of an inflammatory nature. At other times the redness which precedes or accompanies the

separation of the dead part is very slight, and is evidently owing to mere venous congestion, occasioned not only by the disease of the heart, but also by the serosity accumulated in the cellular tissue of the limb, which, from the pressure which it occasions, further retards the return of the blood, and aggravates all the symptoms of the disease. It is, indeed, to this secondary obstacle to the return of the venous blood of the limb, that the termination of the disease in mortification is chiefly to be attributed. It is likewise in consequence of the accumulation of serosity beneath the skin that the state of congestion of the venous system of the limb is not at first perceived."

Dr. Carswell proceeds to state, that in these cases the sloughing rarely extends to a greater depth than the cellular tissue, although the slough may seem on its separation to be deeper.

Mortification of internal organs from an obstacle to the return of the venous blood is always limited, and seldom observed except in the lungs, liver, or intestines. It occurs in the lungs when they are hepatized, the veins being in this state compressed or obliterated, and the arteries much diminished in bulk. Such is sometimes the state of the vessels in the indurated walls of tubercular excavations, as well as of those which traverse the septa. A similar state of the bloodvessels, and induration of the pulmonary tissue, may likewise be produced by an extensive deposition of tuberculous matter. Under such circumstances, portions of the indurated pulmonary tissue become deprived of their vitality, and are separated without the superintention of inflammation. Sphacelus of portions of the liver is not very rare in cases where the organ is nearly filled with cancerous tumors, which produce mechanically extensive obliterations of the veins.

"Mortification from a mechanical obstacle to the return of the venous blood, is well exemplified in intus-susception of the intestines. When the superior portion of intestine passes into the inferior, it carries along with it that part of the mesentery to which it is attached. If it does not suffer much compression, the invaginating process may go on to a great extent; but if it is compressed to such a degree that the return of the venous blood is obstructed, this stage of the disease is arrested, on account of the congestion of all the tunics of the invaginated portion. The congestion is not the consequence of inflammation; it is produced by compression, and in the following manner:—when the mesentery is put on the stretch by the descent of the superior into the inferior portion of the intestine, the veins belonging to it are compressed between the walls of both portions, just at the point where the invagination terminates superiorly. If adhesive inflammation takes place at this point, the peritoneal surfaces of both portions become united, and the veins obliterated. As the arteries are much less affected by pressure than the veins, they continue to pour in their blood into the invaginated portion; this fluid accumulates, and produces an extreme degree of congestion of the mucous and submucous coats, giving to them a deep red or almost black colour. In this state, however, the intestine is not deprived of its vitality. It is in a state of gangrene, but not of sphacelus; for its structure is still entire, and it may, when separated and evacuated, present, after having been macerated for some time so as to deprive it of the blood which it contains, the most perfect state of integrity of all its tunics. Occasionally, however, a portion of the whole of the invaginated intestine is found in a state of complete sphacelus, and is passed in the form of irregular spongy masses or shreds of dirty ash-grey, brown, or black colour."

Two forms of mortification depend on the cessation of the *arterial circulation*. The first results from rupture of the internal and middle coats of a large artery; the second from the presence of accidental products which

occasion obliteration both of the trunks and branches of the arteries of a limb. Professor Turner first described the spontaneous rupture of the internal and middle coats of an artery. In one case, in which mortification took place, the internal and middle coats of the popliteal artery were found lacerated and thickened, and its cavity obliterated in several points by coagulated blood, fibrine, and lymph.

The second of the forms of obliteration of the arteries which has been alluded to, consists in the presence of fibrine, fibrous, or osseous substances in their interior. When the quantity of these substances is such as to interrupt the circulation of the blood through the principal arterial trunk or branches of one of the inferior extremities, mortification is almost always the consequence, from the advanced period of life at which this form of the disease generally occurs, and the very unfavourable state of the arteries to the formation of a collateral circulation. To this form of mortification Dr. Carswell thinks that the terms *gangrena senilis*, *idiopathic* and *dry gangrene* should be limited. We do not exactly understand whether Dr. Carswell intends to employ these names indiscriminately as representatives of the same condition. They certainly are not commonly made use of in this manner. Dry gangrene is generally described and known as a peculiar affection, arising from the operation of several causes, but occasionally dependent on the consumption of improper food. On the other hand, the *gangrena senilis* is not necessarily dry, for we have seen considerable effusion into the subcutaneous cellular tissue in instances of this complaint.

Dr. Carswell's account of the appearances and progress of *gangrena senilis* is extremely good. But it does not require any notice here, the description being familiar and the malady not uncommon. With Dr. Carswell's observations on the cause of this kind of gangrene, we are fully disposed to agree. So far as we have seen it is always, or almost always dependent on obstruction or obliteration of the cavity of the arteries. We are tempted to extract our authors observations upon this point, and on the statement that *gangrena senilis* arises from acute inflammation of the arteries.

"In every case," says he "*gangrena senilis* which I have examined after death. the arteries of the limb were obliterated to such an extent as to interrupt the circulation of the blood. The obstructing cause consisted, in five or six cases, of a fibrous tissue formed either in the walls or cavities of the arteries, and which had converted these vessels into nearly solid cords of ligamentous consistence. This state was traced from the toes more than half way up the leg; it was always connected with ossification of the larger branches and trunks of the thigh and other parts of the body. In other two cases, the obstruction depended on extensive ossification of the principal arteries of the limb; and in several others it was produced by solid fibrine formed around spicula of bone projecting from the internal surface of the arteries. Connecting these states of the arteries with the external appearances of the mortification with which they are accompanied, there cannot, I conceive, remain a doubt that this form of the disease is the immediate consequence of a deficient supply of arterial blood, from a mere mechanical obstacle to the circulation of this fluid. So palpable indeed, and so frequent are the morbid conditions of the arteries which I have described in *gangrena senilis*, that it is more than surprising that any individual who has had opportunities of investigating this disease, should have attempted to ascribe its origin to inflammation of these vessels. Leaving aside the incontrovertible evidence of the material facts which demonstrate the truth of the position which I have laid down, there are other circumstances which show that inflammation of

the arteries cannot be the cause of gangrena senilis such as I have described it. Whether the inflammation which is supposed to give rise to the disease be considered as of an idiopathic or symptomatic kind, is of no import in the decision of the question. For, in the first place, the obstructing cause, viz. fibrous, fibro-cartilaginous, and osseous tissue, could not owe its origin to inflammation in a space of time so short as that which often marks the duration of the disease; and in the second place, the presence of these accidental tissues in the arteries is no proof that inflammation had ever existed in these vessels. Stagnation of the blood from mechanical or physical causes is sufficient to give rise to the formation of these tissues by means of the fibrine of this fluid."

He states without hesitation that the opinions and observations on this subject, contained in the *Leçons Orales* of M. Dupuytren are equally inconclusive and defective. And he believes that the appearances there described as evidences of inflammation of the arteries giving rise to mortification, might with more propriety be considered as characterizing some of the worst forms of phlebitis.

3. *Mortification from Debility.* In the forms of mortification already described, no diseased condition of the solids or the fluids preceded, or was necessary to the death of the part. But in mortification from debility, the constitution both of fluids and solids must be to some degree altered from the state of health. Yet cessation of the circulation is here, as in the other cases, the immediate cause of the destruction of the part.

"In mortification from debility, a local accumulation of blood constitutes, in general, the first perceptible change in the part which is about to be deprived of its vitality. This may take place from the part being submitted to pressure merely from its own weight or that of the body, from slight friction, puncture, or other similar causes. In some of these cases the blood accumulates, partly from the influence of gravitation, and partly from compression of the veins; as, for example, in mortification of the soft parts covering the sacrum, heels, elbows, &c. of persons recovering from typhoid fevers, who are left in that state of prostration which precludes the possibility of changing the position of the body. It is, perhaps, still more conspicuous in some patients similarly confined with paraplegia from injury of the spinal cord.

A state of local congestion is also frequently the only change which precedes the sphacelus of the skin to which leeches have been applied, or which has been scarified or punctured, in greatly debilitated scrofulous children. The skin around the leech-bites assumes a dirty purple, livid, or almost black colour; looks sometimes as if it had been injected with ink; presents no previous redness, heat, or pain, and is not swollen except where the blood is accumulated; it drops off in the course sometimes of twenty-fours, leaving a number of circular openings, which unite and spread by similar succeeding congestions and sloughing of the contiguous skin."

Dr. Carswell refers to the occurrence of mortification in scorbutus, as another striking instance of the influence of general debility in the production of this disease. Portions of the skin often become gorged with blood, die, and slough, without any previous apparent injury. We witnessed, two or three years ago, a remarkable example of the occurrence of mortification from debility. A patient had purpura, and the patches were larger on the lower extremities than on other portions of the body. A physician bled him, without benefit. He bled the patient a second time; and in less than twenty-four hours after this repetition of the depletion, the left foot had become

black, and was perfectly dead. It was affected with dry gangrene, and subsequently separated from the leg at the ankle-joint.

Dr. Carswell includes with the forms of mortification from debility alluded to, the gangrene of the cheek which occurs in children, a frightful, and, happily, a rare form of disease. We need only allude to the works of systematic writers for a description of it. We proceed to the second species of mortification portrayed by Dr. Carswell.

MORTIFICATION FROM THE VIOLENT OPERATION OF MECHANICAL, CHEMICAL, AND PHYSICAL AGENTS.

The mechanical agents, Dr. Carswell observes, which occasion mortification are violent blows and contusions; the chemical, powerfully stimulating substances: and the physical, extreme heat and cold. All these agents produce the same ultimate effect in the part of the body which has been submitted to their influence; that is to say, they deprive, to a greater or less extent, such a part of those properties on which its existence depends. But their destructive effects differ in degree, in extent, and even in kind. For in some cases the tissue may be killed at once, and, in others, its vitality may be so partially destroyed, that recovery may or may not ensue.

1. *Mortification from the violent Operation of Mechanical Agents.* This can, of course, have no definite form, depending, as it must do, on the extent of injury inflicted. Inflammation always supervenes, and by it the sphacelus is occasioned.

2. *Mortification from intense Heat.* The application of excessive heat gives rise to a state of inflammation, gangrene, and sphacelus. The phases are extremely rapid, and this rapidity distinguishes gangrene of this description from that which is the usual consequence of inflammation. Yet we do not suppose that Dr. Carswell implies that the latter *must* precede sphacelation; for the extreme heat kills a part at once, with no preliminary stage of any kind. The characteristic appearances of mortification, produced by the agency of heat, are well delineated by the pen of Dr. Carswell.

“The skin is of a yellow, grey, brown, or black colour; dry and hard; sunk below the level of the surrounding surface, and quite insensible. These are sometimes the only appearances which are at first perceived to follow the action of intense heat, and are certain indices of the complete death of the skin to a greater or less depth. The deeper-seated tissues may also be deprived of their vitality, but to what extent cannot be determined by any change which the cutis may have suffered. The inflammatory redness which succeeds to this state appears almost immediately, and indicates by the rapidity of its course and the peculiar colour which it assumes, the extent both of the gangrene and sphacelus, which could not be determined by any previous change of the cutis produced directly by the heat. The extent of the sphacelus may be said to be always increased by the subsequent inflammation; and parts that were only in a state of gangrene are, by means of it, converted into a state of sphacelus. Whether this state of sphacelus may have been produced by the action of the heat of the subsequent inflammation, the limits of the disease are seldom defined before the end of eight or ten days. The dead are then separated from the living parts, and an abundant supuration takes place from the denuded surface. The solu-

tion of continuity is often imperfectly repaired, in consequence of the exuberant production of granulations, which, instead of acquiring the organization of the cutaneous textures, assume that of contractile tissue, which often gives rise to great deformity of the parts with which it is connected."

We have a very few observations to offer on the subject of the physical effects of heat, which, though rather surgical than strictly pathological, may, we hope, be excused, on account of their practical character.

The physical effects of extreme heat on the surface of the body appear to exhibit the following degrees of difference.

First, the skin is simply reddened, and displays the ordinary tint of inflammation.

Secondly, the cuticle is separated from the cutis, and serum or lymph is effused between them.

Thirdly, the cutis is denuded of its cuticle, and the cutis itself is superficially or entirely killed. If only the superficies is destroyed, a thin film of slough is gradually detached, and the deep remaining portion of the cutis furnishes minute and vascular granulations. If the whole cutis is killed, the slough is of greater density, and the granulations from the subcutaneous cellular tissue are of greater size.

Fourthly, the textures subjected to heat are more or less deeply and completely converted into dry hard eschar. The parts in this condition resemble brawn in colour and in feel.

Such are the leading physical degrees of alteration of the tissues producible by heat. They deserve and demand serious attention, from the modifications of treatment they require. But this is too extensive a subject for us to enter on, in an article of an exclusively pathological description.

The consideration of mortification from heat, not unnaturally leads to that of mortification from cold.

4. *Mortification from Cold.* As our author remarks, the local and general effects of severe cold are, in many respects, very similar to those produced by intense heat. If the degree of cold be not very great, the circulation and temperature of the skin are increased, as is shewn by this tissue assuming a redder colour, and feeling warmer than before. On the contrary, if the cold be very intense, it may not give rise to any appreciable degree of local excitement; the vitality of the skin and even of the deeper-seated tissues at the same time, may be either greatly reduced or entirely destroyed by the direct operation of this physical agent. There is, however, this difference between the local effects of heat and cold, viz. that the former may produce complete disorganization of the tissues submitted to its action; whereas the latter never produces such a change. Under the operation of the former the local redness rapidly increases, under that of the latter it rapidly diminishes; and in the same manner does the sensibility increase and decrease under the influence of those agents respectively.

We need scarcely say, that the most frequent cause of mortification of a frozen limb, is exposure to natural or artificial heat after the application of the cold.

4. *Mortification from Stimuli.* The stimuli now referred to are such as exert a chemical influence on the tissues with which they come in contact.

The mineral acids are cited as examples of chemical stimuli, which occasion local death, when they are applied to the skin or mucous membranes of the digestive organs. Their local effects are very similar to those produced by excessive heat, nor do we think that it is necessary to refer to them more particularly.

The last division of this fasciculus is dedicated to—

MORTIFICATION, FROM THE DELETERIOUS INFLUENCE OF CERTAIN POISONS.

The poisonous substances, says Dr. Carswell, which give rise to mortification are either natural or morbid products, derived from the animal and vegetable kingdoms. The former consist in a peculiar healthy secretion of certain animals, vulgarly termed *venom*; the latter are generated by a state of disease of the animal solids and fluids, and are called *virus*. The deleterious agent formed by the decomposition of animal matter, and by that diseased state of rye which gives rise to mortification, has received no specific appellation.

1. *Mortification from a Deleterious Agent generated in Healthy Animals.* This form of mortification often follows the bite of the *cobra di capella*, the rattlesnake, and viper.

“When the poison of these animals is inserted into the cutaneous and cellular tissues of one of the limbs, the most acute pain is produced, followed by œdema, swelling, and hardness. If there be any redness of the skin around the wound, it is of short duration, and is succeeded by a livid discoloration, which increases in extent, followed by the formation of phlyctenæ, and diminution of temperature of the part: The hard œdematous swelling of the skin and cellular tissue then becomes soft, crepitates when pressed, and a sanious discharge of a fetid odour runs out from the wound. Such are the local effects of the poison when it possesses a degree of virulence sufficient to destroy the vitality of the part. In milder cases, they are limited to a certain degree of œdematous swelling, accompanied by inflammatory redness of the skin, which, being generally greater than in the former case, shews that the occurrence of sphacelus is essentially determined by the primary effects of the poison on the vital properties of the tissues to which it is applied.”

2. *Mortification from a deleterious Agent, generated during the Decomposition of Animal Substances, and in Animals in a State of Disease.*

Dr. Carswell first alludes to the circumstance of mortification of internal organs, especially of the lungs and liver, in connection with and dependent on mortification of some external part. He concludes that some poisonous agent is generated, and taken into the circulation in cases of this nature. But mortification is much less frequent than depositions of pus under these circumstances, and the subject of the purulent depositions is too curious and too extensive to admit of being thus dismissed in a paragraph.

Our author next adverts to hospital gangrene, as another instance of a similar description; and to the *pustule maligne*, or *charbon*. Some of our readers may not be aware that the latter is believed to originate in horned cattle, among which it sometimes prevails epidemically to a great extent, and that when it occurs in man it is always derived from such animals.

The parts of the body on which it is generally observed are those which are usually uncovered, as the face, neck, breast, and shoulders; the hands and arms, feet and legs, parts in fact which come in contact with the skin, blood, or flesh of the affected animals. That the blood is strongly impregnated with the septic principle generated in this disease, would seem to be established by the fact, that parts of the body on which this fluid has been deposited have soon after been affected with malignant pustule. Similar effects follow its injection into the veins.

Malignant pustule commences in the form of a small vesicle, filled with a somewhat bloody serosity, accompanied with a circumscribed œdematous swelling of the skin and cellular tissue, which soon extends in breadth, followed by an erysipelatous redness of the skin. As the swelling increases, the skin acquires a glossy aspect, and presents here and there small and large phlyctenæ. The redness soon assumes a livid tint; the central portion becomes brown or black, hard and insensible, whilst the surrounding parts are tense and emphysematous. These changes are produced with more or less rapidity, and sometimes spread to a considerable extent, followed by extensive sloughing of the skin and cellular tissue.

The carbuncle of plague presents local characters very similar to those of the malignant pustule. Dr. Carswell concludes by a description of the effects of the use of diseased rye as an article of food, and of its tendency to give rise to one of the worst varieties of mortification. It may not be amiss to notice this form of gangrene, though some of our readers are no doubt familiar with the descriptions of it, contained in works that have previously been published.

The symptoms that accompany mortification, from the use of diseased rye as an article of food, present considerable variety.

"In one series of cases, mortification is attended or preceded by vertigo, drowsiness, and a malignant form of fever; by a sensation of numbness in the legs, which become afterwards painful, slightly swollen, but not inflamed. The skin is cold and livid, and the sphacelus commences in the centre of the limb, and does not reach the skin till some time after. In a second series of cases, the sphacelated parts are dry, livid, or black; these appearances commencing in the toes and extending gradually upwards, sometimes as far as the thighs. In a third series of cases, the disease commences with lassitude and a sensation as of insects creeping under the skin, and without any febrile symptoms. Soon afterwards the extremities become cold, pale, wrinkled, and benumbed, and at last quite insensible, and incapable of motion; afterwards acute pain is felt, referable to the central parts of the limb. There is now fever and headach; pain extending from the hands and feet to the shoulders, legs, and thighs; and lastly the affected parts become dry, shrunk and black, and drop off at the joints. Entire extremities are thus separated from the body without hemorrhage. Lastly, in other cases, the chief symptoms are, at first, spasmodic contractions of the limbs, afterwards great weakness of mind, voracity of appetite, which generally terminate in fatuity, and sphacelus of some of the limbs. The parts most frequently affected with gangrenous ergotism, as it is called, are the inferior extremities."

Dr. Carswell observes that, however obscure the *quomodo* of the action of the spurred rye may be, it is evident that the process which terminates in mortification is not of an inflammatory character. All the local changes appear to be produced as direct consequences, he thinks, of the diseased

grain, acting through the medium of the blood or nervous system, or of both. In several animals that died after having been fed for some time on spurred rye, and had presented several of the symptoms already mentioned, gangrenous spots are said to have been found in the stomach, intestines, and liver.

This concludes the fasciculus before us—one creditable in every respect to its author. We think it the best he has yet offered to the public, and we conceive that it presents a complete, consistent, and very useful account of the forms and modes of mortification. We strongly recommend it to our readers.

Of the plates, we can conscientiously speak in terms of equally high approbation. They are four in number, and contain eighteen figures. Perforation of the intestines and of the pulmonary pleura are represented in the first—*gangrena senilis*, and mortification of the skin and subjacent cellular tissue, from an obstacle to the return of the venous blood, are delineated with graphic force in the second—the state of the bloodvessels in *gangrena senilis*, mortification of the intestine from intussusception, and mortification of the lung from obliteration of the arteries and veins, the result of chronic induration of the pulmonary tissue, with mortification of the same organs, as a secondary consequence of mortification of the lip, form the subjects of the third plate—and the fourth is devoted to mortification of the lung, circumscribed by adhesive inflammation, to mortification of the skin from leech-bites, and to mortification of the lower lip, occasioned by the bite of an insect. Again we recommend this fasciculus to our readers, to whom we are sure that it is calculated to convey much valuable information.

We now turn to the work of M. Cruveilhier, to which we have lately dedicated less attention than its merits fairly demand. The subject to which we shall restrict ourselves at present is, diseases of the fœtus, or some of the diseases that affect or curtail fœtal existence. The different observations of M. Cruveilhier, on this interesting point of pathological anatomy are spread, in a desultory manner, through four fasciculi of his valuable work. However considerable may be the advantages of the publication of extensive and expensive volumes in divided parts, those advantages are diminished, though, perhaps, not counterbalanced, by the interruptions of natural connexion, and diffuseness and repetition of detail. Diffuseness, indeed, is the besetting sin of M. Cruveilhier's publication, and, for aught that we can see, the termination of his and of his readers' labours is almost indefinitely distant. But their value is too great to warrant asperity of criticism, and we gladly turn to glean the useful facts from the scattered pages.

The fœtal maladies delineated by the pencil and pen of our author are diseases of the brain—diseases of the spinal marrow and monstrosities—diseases of the lungs and thymus gland—diseases of the mouth and pharynx—and, lastly, as a sort of caudal appendage, diseases of the placenta. We shall take these various subjects in the order we have mentioned, though such semblance of method, slight as it may be, is not to be discovered in the fasciculi now spread before us.

DISEASES OF THE FETAL BRAIN.

These are noticed in the fifteenth and seventeenth fasciculi. They are apoplexy—hydrocephalus—atrophy of the convolutions of the brain—and absence of the cerebellum. The 37th number of this Journal contains a tolerably full account of these and some other fetal affections. We shall therefore present a brief description of the complaints that have been noticed in that number, though we will not waive all specific details, in order that the present article may be tolerably complete.

1. *Apoplexy of newly-born Children.* It appears from the researches of M. Cruveilhier at the Maternité, on the cause of death of still-born children, that apoplexy is that cause in a third of those who die during the progress of labour. He has observed this in almost all the cases, usually considered as asphyxia or congenital weakness.

The constant anatomical character of the apoplexy of newly-born children is, an effusion of liquid blood within the cavity of the arachnoid. Most frequently the effusion is limited to the surface of the cerebellum, sometimes it covers at the same time the posterior lobes of the cerebrum, and in some instances the cerebrum and cerebellum are covered with a layer of blood, the source of which it is sometimes difficult to discover. The extravasation rarely occupies the cavity of the ventricles, but M. Cruveilhier has seen three such cases. He has never witnessed extravasation into the substance either of the cerebrum or cerebellum, although it is occasionally intensely injected. In all the cases which he has seen the spinal dura mater was distended with liquid blood, contained both in the cavity of the arachnoid and in the sub-arachnoid cellular tissue.

These effusions are often accompanied with collections of blood under the hairy scalp, and ecchymoses and small collections are frequently met with between the peritoneum and the cranial bones. Once M. Cruveilhier saw coagulum effused along the whole length of the superior longitudinal sinus, between the dura-mater and the bone; and on another occasion the pericranium of the two parietal and occipital bones was separated from them by a thick layer of coagulum. Our author observes that this separation may account for those occipital abscesses that we see occur during the first days of life, and in which the bones are laid bare. He attended a child in whom the large part of the occipital bone came away in three fragments; the child lived.

All apoplectic children are not born dead. In a tolerable proportion respiration is established, either spontaneously or in consequence of the exertions of the practitioner, and they live 24 or 48 hours, or even three or four days in a state of weakness, torpor, immobility, and diminished temperature. Probably some survive when the extravasation is not very great. M. Cruveilhier has never observed paralysis.

The cause of this fetal apoplexy is in many cases inscrutable. So far from its being due to the application of the forceps, M. Cruveilhier believes that this frequently prevents it. In the majority of instances it is probably owing to the length of the labour. But our author has seen it after an ordinary birth, and even after a very rapid delivery, whilst, on the other hand, labour has lasted forty-eight hours or longer without any accident happening

to the child. M. Cruveilhier seems to suppose that constriction of the neck by the cord, or by the neck of the uterus and the external soft parts after the issue of the head, or after that of the trunk in cases of turning or feet-presentation, may produce the disease. Compression of the umbilical cord in a case of presentation of the cord, has been a very manifest cause. M. Cruveilhier also supposes that, in many cases, after the escape of the waters, the uterine contractions on the cord may be an efficient agent.

M. Cruveilhier looks on the affection as always produced by mechanical means, and thinks that a speedy termination of the labour would prevent it in the greater number of cases. He has seen retropulsion of the cord, when this presented, practised successfully at the Maternité; and in feet-presentations a speedy application of the forceps, after the exit of the trunk, will save many children.

The cerebral apoplexy is sometimes accompanied with extravasations in the lung, in the thymus, whilst the liver and spleen are gorged with blood, and the gastro-intestinal mucous membrane is much injected. M. Cruveilhier relates seven cases. Two of these (the first and third) are detailed in the number of this Review from which the preceding text is transferred, and to which we have already sufficiently alluded.

2. *Complete Absence of the Cerebellum in a Girl Eleven Years of Age.* Alexandine La Brosse was born in 1820. She was properly formed, but small, and she continued a delicate child, with a great deficiency of intelligence. At the age of seven years she fell under the observation of Dr. Miguel, who remarked extreme debility of the extremities, a want of intelligence, and an incapability of distinct articulation. In January, 1830, she was admitted into the Foundling Hospital. She was then paralytic in the lower limbs, and spoke with difficulty; though nine years and a half old, she appeared no larger nor more developed than a child of six years of age; she was feeble; imbecile in mind; answered questions with hesitation. In January, 1831, she had fallen into a cachectic state, and kept her bed for three months previously, and had scarcely any power of motion in her legs, although their sensibility remained. She was stupid, never spoke, or answered only yes, or no, to the questions that were put to her, and neither expressed feelings of pleasure nor of pain. It was ascertained that she was addicted to masturbation, and that she had suffered from epileptiform convulsions. In March, 1831, she died.

Dissection. Passing over particulars not essential to the interest of the case, we are informed that the inferior occipital fossæ were filled with serous fluid—that in place of the cerebellum, was a gelatinous membrane, attached to the medulla oblongata by two membranous and gelatinous peduncles, the right one of which had been torn. Towards these peduncles were found two small masses of white substance, insulated, and about the dimensions of a pea, on one of which was one of the nerves of the fourth pair. The tubercula quadrigemina were sound, and behind and below them was observed the orifice of the canal of Sylvius. There was no fourth ventricle, nor any trace of the pons varolii. The anterior pyramids terminated in the crura cerebri.

There were miliary tubercles in the lungs, and ulcers in the small intestines.

The reflections of M. Cruveilhier are directed to three points: first, to the question whether the absence of the cerebellum must be deemed congenital or the consequence of wasting after birth; secondly, to the phenomena attending the case; thirdly, to the opinion entertained by Gall, that the cerebellum is the seat of the amatory instinct.

1. He believes that the cerebellum was congenitally absent, because there was no trace of the transverse fibres of the annular protuberance and peduncles. Now these are the commissure of the cerebellum and subordinate to the existence of the lateral parts; so that if the latter had been formed originally, the former would probably have been formed also. On the other hand, the hemispheres of the cerebellum are found destroyed by morbid changes, without any sensible diminution of the size of the protuberance and peduncles. For this reason, then, M. Cruveilhier believes that the cerebellum was congenitally absent.

2. Of the phenomena of the case, the weakness of the lower limbs, and the imperfect developement of the intellect, are the principal that were observed. But that observation was unfortunately defective, and perhaps in accurate. Little then can be founded on it.

3. The subject of the case was reported to be addicted to masturbation, and the state of the vagina discovered after death bore out the supposition drawn from her conduct. This fact is in contradiction to the theory of Gall, on the functions of the cerebellum, a theory which M. Cruveilhier assures us is abundantly opposed by physiology and pathology.

3. *Atrophy of the Convolutions of the Brain.* This has been previously noticed in this Journal, but we re-introduce the subject in order to render the present article more complete.

Atrophy of the convolutions of the cerebrum may be general or partial, congenital or subsequent to birth. The remarks will be observed to be chiefly applicable to the atrophy of the latter character.

When it takes place prior to the complete developement of ossification, and the deficiency of brain is not made up by a liquid, the bones sink in proportionately to the atrophy. If, on the other hand, ossification of the bones is completed, or if, the ossification being imperfect, serum replaces the deficiency of cerebrum, the cranium may maintain its natural volume or even exceed it, as in certain cases of congenital hydrocephalus where scarcely any cerebral matter exists. In some cases the cranial bones, instead of sinking inwards, exhibit an extreme thickness.

Atrophy of the convolutions presents itself under several forms.

1mo. It often consists in a simple diminution of volume.

2do. In other cases it is a sort of shrivelling of the convolutions, which present an unequal and granular surface. Sometimes this shrivelling is accompanied with different shades of colour, evidently dependent on a former effusion of blood. In either case, the serum fills the void between the bones of the cranium and surface of the brain. This serum occupies the sub-arachnoid cellular tissue, and when the atrophy is very circumscribed it raises the arachnoid, like a serous cyst.

These two kinds of atrophy are often observed in old men whose faculties are impaired; and in old women known at the Salpêtrière by the name of *gâteuses*, because they pass under them both their urine and their stools, are bed-ridden, and usually die of bed-sores.

The granular shrivelling of the convolutions very often co-exists with apoplectic atrophy of the same convolutions, and occupies the vicinity of the cellular cicatrices. In this case the surface of the convolutions presents most commonly a yellowish discoloration, attesting the prior existence of a sanguineous collection in the neighbourhood. This shrivelling co-exists also with yellowish points, as small as grains of sand, and with small linear cicatrices cutting the convolutions longitudinally, or transversely. These points are so small, the lines so narrow, that they would escape even an attentive examination.

3to. There is a third order of atrophy of the convolutions which consists in their transformation into a cellular tissue of a brownish colour. This however is the result of an apoplectic attack, and M. Cruveilhier reserves its more complete description until he arrives at the alterations occurring in the sites of apoplectic extravasation.

4to. There is an atrophy of the convolutions with induration of the cellular tissue, which sometimes becomes as firm as cartilage. This induration is the result of inflammation.

5to. Another form of atrophy results from the loss of substance undergone by the convolutions after the red softening. One or other face of the convolutions, often both, are deprived of the grey substance to a greater or less extent. The limits of the loss of substance are marked by an irregular line. The surface of the convolution so denuded is covered by a cellular membrane, of a yellowish colour, and more or less vascular.

6to. A sixth kind of atrophy consists in the transformation of a portion, or of the whole of one hemisphere, or of two hemispheres, into a membrane of extreme tenuity. Often there remains of the brain only a nucleus, represented by the optic thalamus, and the corpus striatum more or less altered. This lesion is most commonly congenital, but M. Cruveilhier is in possession of some cases which appear to shew that a similar atrophy extended to the whole of one hemisphere has been post-natal.

7to. In a seventh kind of atrophy, each convolution is converted into a serous cyst with transparent walls, giving at first the idea of an hydatid cyst.

M. Cruveilhier adds a case, which we omit.

4. *Hydrocephalus*. M. Cruveilhier's observations upon this head chiefly appertain to the wasting or imperfect development of the brain, attending collections of water in the cranium.

He observes that, of the numerous lesions of development to which the fœtal brain is liable, hydrocephalic effusion into the ventricles is unquestionably the most important. Hydrocephalus, he proceeds, presents numerous varieties, relating, *first*, to the quantity of liquid and volume of the cranium; *secondly*, to the condition of the brain. In the first point of view, the cranium may exhibit a greater volume than natural, one of proper dimensions, or one too small.

Hydrocephalus may be attended with such augmentation of the bulk of the cranium, that delivery is impossible without its perforation, either spontaneous or artificial. M. Cruveilhier has twice seen this occur spontaneously.

The state of the brain itself is very variable. Sometimes it is perfectly sound. Occasionally it is even hypertrophied; and in cases of this description, hydrocephalic children have produced astonishment by the precocity

of their intelligence. But from such intelligence to idiocy the step is brief, and a few spoonful more of effusion are sufficient to effect the metamorphosis.

Hydrocephalus may be attended with more or less destruction of the brain, or an anencephalic condition of the organ. Sometimes this is limited to the roof of the ventricles and the upper convolutions; sometimes it involves both the roof and floor; most commonly the substance of the brain itself remains uninjured; but sometimes it is destroyed more or less completely, as M. Cruveilhier found to be the case in two still-born children at the Maternité, in whom neither brain nor cerebellum, nor annular protuberance existed, but merely an indurated and shapeless nodule on the basilar groove of the occipital bone.

There are two kinds of the anencephalic condition of brain:—Hydrocephalic anencephaly, and anencephaly with absence of the cranial vault, or rather with depression and malformation of the bones. In both cases, the absence of the cerebrum must result from the same cause, an error of nutrition, the effect of a serous or inflammatory fluxion, directed on the cerebral substance. That hydrocephalic anencephaly is attended with more or less inflammatory action is demonstrated, in the opinion of our author, *first*, by the brownish-yellow discoloration, which attests the morbid process of reparation of the cerebral substance; *secondly*, by the density, occasionally cartilaginous, of that substance itself.

The study of hydrocephalic anencephaly exhibits the point to which the foetal organization can support the loss of an important vital organ. There can be no question that, after birth, life is compatible with great morbid alterations, provided they gradually occur; but these alterations are not to be compared with those which occur in the foetal brain and lungs. Life has gone on after birth; with only a few lobules of the latter permeable to the air, and hydrocephalic children have lived days, and even months, with the minutest fractions of the encephalic mass.

M. Cruveilhier observes that the alteration of the cerebral substance, in hydrocephalus, is not proportioned to the quantity of liquid, the latter generally constituting the measure of the dimensions of the head. Frequently the proportion is inversely to this, the most complete anencephaly existing in combination with a very small head. He relates two cases in support of this position, but we have not space for the details.

Infants with small heads are, as may be supposed, not in all cases hydrocephalic. M. Cruveilhier saw a child that lived eighteen months with a head so small, that it was like that of one of the lower animals. The facial angle was as acute as in a dog, and the occipital crest was developed as in brutes; the vertical diameter of the cranium was one inch. The child gave no sign whatever of intelligence; its limbs were continually in motion; it cried to express its wants; and had, from time to time, convulsive movements, in one of which it finally expired. The cranium was filled with a brain, which differed from a healthy one only in its small dimensions.

We find that it is impossible to comprise in this department the remainder of the present article. Our readers must turn for its continuation to the *Periscope*, in which it will be found concluded.*

Periscope ;

OR,

CIRCUMSPECTIVE REVIEW.

"Ore trahit quodcunque potest, atque addit acervo."

I.

SPIRIT OF THE ENGLISH PERIODICALS, AND NOTICES OF
ENGLISH MEDICAL LITERATURE.

CATALEPSY.

THE following case has appeared in some of the Irish newspapers, and is copied into the Dublin Medical Journal, so that we take it for granted the editors have ascertained the authenticity of the statement.

"The subject of the disease is an extremely handsome female, about the age of nineteen, a resident of Rathdrum, county of Wicklow, and a married woman. About June last she came to Dublin for a severe hurt in the hip, and was at the time *enciente*. A variety of treatment was adopted during some time she remained in Dublin, and during which time she had very bad health, loss of appetite and rest, and great dejection of spirits; but from her peculiar state, very strong or active remedies were considered inadmissible. She was unable to leave her bed; but finding herself not getting better, her friends or husband not coming to see her, she suddenly got out of bed, dressed herself and walked about, though for some days before she had been unable to do so, or even at all leave her bed; she also left the hospital, but returned to it in October last, with an increase of the disease for which she was first admitted, and during her sojourn in the country she had miscarried.

A few days after her return to the hospital she was greatly excited by the abuse of a drunken man, who spoke very harshly to her, and immediately after she got a very severe hysterical fit, which for some time returned daily, but about the ninth day she had a pa-

roxysm of quite a different character, which was always very severe: all the muscles appeared to be firmly fixed—impossible to open either the jaws or hands—twists about her thumbs—and, should any person endeavour to hold her, she strikes at them with the greatest violence, catches at her hair, and, if not prevented, would tear it out in handfuls; she attempts to bite her own hands, and those of any person near her, and if prevented she bites the bed-clothes; her feet, if left loose, she kicks with dreadfully, in all directions. One of these paroxysms lasts but a few minutes at a time, but recur during the day very frequently, and are brought on by any slight disturbance. During the intervals she is apparently well, and in good spirits.

So far her malady may be considered of an hysterical nature, but when she was visited by the physicians on the morning of the 18th of October, it was found that a most singular and most inexplicable symptom had established itself during the night. It appears that she had experienced in the course of the night a paroxysm of unusual duration, which had commenced by an acute 'stitch' in her side. When the fit had passed away, the voice of the patient was utterly gone, and up to the time of committing this account to paper, she had not articulated a syllable. The sense of hearing, however, has remained unimpaired, and either by writing or by signs she makes it known that she understands any question which may be directed towards her. On the day after she underwent this loss of

voice, the paroxysms commenced to assume a more violent aspect, and also to return with increased frequency. Soon after which change for the worse, her disease acquired for the first time all the features of a case of genuine *Catalepsy*. About a minute after the cessation of one of the fits, and when she appears to be perfectly recovered, she suddenly drops into what appears to be a sound sleep. The countenance is clothed with an expression of the purest placidity, the eyes are closed, and when, with a finger, the eyelids are raised, the eyeballs are seen to be rolled upwards, and the pupil dilated; she breathes quietly, and her arms, legs, and feet, though of themselves rigidly extended, are capable of being bent without any violence, and retain whatever position they may be placed in. At first the *cataleptic* seizure occurred only after the other paroxysms, but a few days only elapsed when it began also to precede them, and at the same time to extend itself to a greater length. On the 25th, the following was the order in which the series of very interesting symptoms exhibited themselves: the patient was in the act of making signs in reply to a question which had been put to her, when suddenly a smile overspread her face, and in an instant the cataleptic insensibility was completely established. She lay tranquilly for about fifteen minutes, when a violent paroxysm introducing itself as instantaneously as the first, interrupted her repose for about three minutes; then again the catalepsy returned, and lasting for another quarter of an hour, it left her in full possession of all her faculties except speech. She awoke, uttering a few piercing cries, which gradually subsided into a sighing moan, and then pressed her hands quickly to her left breast, as if she had pain in the direction of the heart. Another day that we saw the patient, the catalepsy lasted upwards of three hours, during all which time she lay extended and perfectly motionless; on this occasion, however, her countenance no longer presented its accustomed placidity; its veins, to their remote branches, swollen with blood, and her colour became of a

dark purple; her limbs stiffened into unusual rigidity, and remained so until the dark hue deserted her face, when instantly they became relaxed and pliable. Whilst entranced in the manner described music was played near her, but she seemed not in any manner to notice it: her head was then placed over a tub, and cold water was discharged upon it from a height: she screamed violently, her face became suffused, and she had a fearful fit of sobbing, but did not remain conscious. On being questioned afterwards, at a moment that she was sensible, as to whether she had heard the music, or felt the shock of the fluid, she replied in the negative. It has been asserted in some medical publications, that patients in the condition of this girl were sensible of impressions made on the epigastrium, on the soles of the feet, and on the palms of the hands: it was accordingly attempted to excite her attention, or to arouse her by directing loud sounds to those parts, but the trial did not succeed. It is remarkable, that whilst all the more striking functions of life are suspended by these attacks, the circulation never betrays any other disturbance than an inconsiderable acceleration. The features of this case enable us to understand the so called 'Extacies,' in which cunning enthusiasts of several sects have represented their tools or their dupes to have been transported, 'as to their inward man,' into the presence of the Deity, and there to have been favoured with special revelations."*

GALVANIC EXPERIMENTS. By Dr. DUNBAR, of Winchester, Virginia.†

The following experiments are detailed in the first Number of our late contem-

* In a recent number of the *Lancet*, *ERINENSIS* has impugned the accuracy of the above report. But as this scepticism is mixed up with strong party-feeling, we do not deem it necessary to suppress the case, unless its authenticity be denied by more than anonymous testimony.—*Editors*.

† Baltimore Medical Journal.

porary, the Baltimore Medical Journal.

"NEGRO BEN, the subject of these experiments, aged 26, was a stout, well built subject, the muscular tissue of the body remarkably well developed, indicating great power. He was suspended from the gallows about thirty-five minutes, and in ten minutes after being cut down was delivered to a professional friend by the sheriff for me, and brought to a room (where every thing was arranged for the experiments) which had been liberally granted by the mayor, adjoining the town hall. The body was immediately placed on the operating table. The acid mixture (dilute muriatic acid) was thrown on the plates as soon as the conveyance bringing the body appeared in sight. It was discovered from the unusual freedom of motion in the neck, that it was dislocated—or, as it is called in common language, the *neck* was broken; and upon cutting down in a subsequent stage of the experiments, it was satisfactorily ascertained that the first and second vertebræ (atlas and dentata) were separated by a space sufficient to admit the end of the little finger. The appearance of the face was quite natural, and seemed as if the unhappy subject of the justly offended law had passed from life with none of those struggles and dreadful agonies which attend the throes of dissolution, and particularly in this most horrible mode of causing death.

The experiments were now commenced by a gentleman to whom was assigned the anatomical part, exposing, by a very handsome dissection, an important nerve in the neck, which supplies the nervous power to the lungs and stomach (par vagum, or pneumogastric). A long silver needle, similar to those used in acupuncture, was now introduced, through the space between the ribs, deep into the substance of the heart. The object of introducing a needle into the heart was to endeavour to ascertain whether any irritability remained, and to attempt to throw some light on a disputed question, whether the heart was susceptible of excitation by the galvanic fluid.

The positive pole of the battery was now applied to the nerve (par vagum,)

and the negative pole to the silver needle in the heart. There was no perceptible action of the heart, as it would in all probability have been evidenced by the quivering motion of the needle if it had taken place: and in no way that we could discover, was its irritability evidenced, either by the simple introduction of the silver probe, or the action of the galvanic fluid. But the effect on the other parts was very evident. The muscles of the neck and chest were affected by strong convulsive twitchings, most strikingly displayed in those muscles called by anatomists platysma-myoideus, sterno-thyroideus, and mastoideus, pectoral and intercostal muscles. There was also a convulsive motion of the muscles in the region of the stomach, and a contraction of the muscles of the throat, as in the act of swallowing.

A needle was now inserted into the tendinous head of the diaphragm, the positive wire of the battery applied to the par vagum nerve, and the negative to the needle. The result was a slight convulsive motion extending over the chest and abdomen. The contraction and relaxation of the diaphragm was very evident from the protruding and relaxation of the abdominal muscles; the effect seemed to increase as the acid had time to act on the battery. The positive wire was now applied to a needle inserted into the seat of the phrenic nerve (a nerve distributed to the diaphragm, and has an important influence in the function of breathing). An incision was made down to the tendinous head of the diaphragm, and the other wire (negative) applied to the incision. The result was very similar to the preceding experiment, with the addition of an agitation of the chest, compared by an intelligent gentlemen present, and a close observer, to that of a person affected by hiccough.

I think it proper to notice, at this stage, a peculiar action of the galvanic fluid on the nerve and muscular fibre, observed by myself, and confirmed by one of the gentlemen assisting me. The positive pole, whenever it touched the nerve or muscle, produced an action or whitening very similar to that which

is produced by lunar caustic when applied to an exposed muscle.

A nerve above the middle arch of the eyebrow (supraorbital) was now exposed and the positive pole applied to it, and the other below the lower lid. The result was a contraction of the muscle, causing a natural wink, and an opening and closing of the eyelids, which was compared to that when the eye closes in a living person, from fear of being injured by some offending object being thrust at the eye. There was also a contraction of the muscles of the cheek, similar to what is seen in some persons who suffer from neuralgia of the face—or aptly likened by a friend to that motion of the cheek when an effort is made by the motions of the face alone to drive off an annoying fly which has settled upon it, without being at the pains to raise the hand for the purpose.

In the next experiment a silver needle was introduced into the facial nerve, one pole applied to it and the other to the cheek. The effect was slight motions of the face, and distention and contraction of the sides of the nostrils, resembling much the expression of disdain. The effect on this and the preceding nerve was very slight, compared with that produced by Dr. Ure, and so vividly painted by him. He says 'the expressions of rage, terror, anguish, and ghastly smiles were produced, and united their hideous expression in the murderer's face, surpassing the wildest representations of a Fuseli or a Kean.' In these experiments on the muscles of expression, with the exception of the expression of disdain, as before mentioned, none of those wonderful plays of the features were well marked which are so manifest when the countenance is animated by the mind, in its varying conditions of wild passion and pleasurable emotion.

The nerve going to the tongue (hypoglossal or 9th pair) was now touched by the positive pole. An interesting result ensued in the production of motion of the tongue alone. The positive wire applied to the silver needle inserted in the facial nerve, and the negative to the tip of the tongue, a very striking effect was produced, characterising this as one of the most interesting experi-

ments performed. The result was a rapid vibratory motion of the tongue, compared by several gentlemen to that of a serpent's tongue when alarmed or enraged. There was also a swelling or bulging out of the flesh or muscles under the lower jaw, which was agitated by a quick vibratory action, and one gentleman thought he heard the teeth striking together. The next experiment was the application of the wire to the muscles which assist in closing the lips and mouth. The result reminded me of the action of the lips when a person is muttering to himself, or about to utter words in a soft low voice—or, in the words of a valued friend, extracted from the notes furnished me, the effect in his view in this experiment was as follows:—The application of the galvanic influence in this experiment really did appear like animation; the lips acquired a motion precisely like those of a person reading to himself; and I do not know if this was not the most natural and pleasing experiment.' The expression of countenance of the criminal, in this stage of the experiment, caused a stare of amazement in many of the spectators.

A nerve (median in the arm was now exposed, and an incision made into the middle of the little finger—positive pole applied to the nerve, and negative to the little finger. A most interesting and vivid display of the galvanic power was the consequence. The arm raised itself from a horizontal position with so much strength and violence, as to require the exertion of considerable power in the operator to restrain its freedom. It repeatedly made efforts resembling those of life to jerk its hand away from his grasp, and when permitted, struck against the chest with great violence, settling in the attitude of a pugilist when prepared to defend from the attack of an adversary. The motions of clenching and opening the hand, and the drawing up and extending the arm, during the progress of this experiment, was described by one gentleman something like the motion of one sowing grain in a field, if the body had been erect. The principal muscles of the arm were contracted so as to form a swelling, and their lines of de-

marcation were very conspicuous on the skin. During part of the time the forearm continued in its fixed position, and exhibited a tremulous motion, resembling that of the limbs of an animal immediately after receiving a blow on the head. The fingers were clenched on the hand in this experiment. These phenomena continued about half a minute, and then ceased. The poles of the battery were then removed, and soon after re-applied. The same phenomena ensued with equal violence upon the repetition of this experiment several times.

The ulnar nerve was then transfixed with an acupuncture needle in the elbow, and positive pole applied to it, and negative to the little finger. The effect produced was a rapid motion of the fingers, but in a manner which was particularly striking to all who witnessed their action. Instead of being flexed at the same time, they moved sometimes rapidly, at others in a more gradual motion, but alternately, being greatest in the little finger, which was the most flexed, and diminishing towards the forefinger. The motion of the fingers, in this experiment, was compared by one to that when playing on the flute, and by others to the action of a violin performer when in playing he works upon the strings of that instrument.

These two experiments were decidedly the most remarkable, and exhibited the power of this most wonderful agent more completely than any other performed, and excited great and renewed surprise and astonishment at the effect of this magical influence, which could produce such wonderful phenomena, and so closely resembling those of a living person in the limbs of a body, whose spirit had deserted it for ever.

A needle was now introduced into the spinal marrow through the vacancy caused by the separation of the vertebræ, and another inserted into the heart and head of the diaphragm, but little effect was produced, other than the quivering motion of the muscles of the neck and chest. The spinal marrow being now completely exposed in the neck, positive wire applied to it and

the negative to the foot, the effect was not remarkable; there was a slight convulsion of the muscles of the limb.

A needle being now inserted into the sciatic nerve, and another in the ham, there resulted a spasmodic action of the large muscles of the thigh; when the needle was changed to the inside of the foot, and the positive pole applied to the one in the ham, and the negative to that in the ankle, a much more marked and decided effect was perceived. The leg vibrated strongly (the subject lying on the abdomen); a swelling of the muscles of the calf of the leg; the toes were flexed, and extended with considerable freedom, at an angle quite as much as when extended in the act of stepping or walking.

With these the experiments ceased, the body having become externally cold, and the irritability sensibly exhausted; the power of the battery appeared also very much diminished, which will account for the weakened action produced in the last experiments.

I have already occupied so much space, that I am admonished to draw these remarks to a close, which I shall do in a few words. It may be proper to mention the power of the battery employed in the above experiments, and that of Dr. Ure, so that a comparison of results may be instituted, and it will then be left to scientific persons to judge of the success which has attended these experiments. The battery belonging to Mr. Edmondson, and used in this series of experiments, consisted of two hundred pairs of Wollaston's plates, each two inches square, arranged in four troughs, connected by tinfoil communications, but which, from a more perfect mode of insulation, was estimated in Dr. Cohen's letter to me to equal one of three hundred or three hundred and fifty plates, constructed in the usual manner. Dr. Ure's battery consisted of two hundred and seventy plates four inches square, with insulating handles. There was therefore a great difference in the surface exposed to the acid. In Ure's plates, a surface of sixteen inches was exposed to the combined action of two powerful acids,

nitric and sulphuric; whilst in ours a surface of four inches only was exposed, acted upon principally by muriatic acid. During one stage of the experiments, when the action of the battery appeared decreasing, a small quantity of nitric acid was put in the troughs, which was just before those beautiful experiments on the arm.

In the performance of these experiments, the gentleman associated with me were Drs. Conrad and Davidson, and my pupil Mr. Lees.

The medical gentlemen present at these experiments, were, of the town, Doctors, Holliday, Baldwin, M'Guire, and Pennington—of the country, Doctors Lynn, Gray, and Orrick—and several students of medicine and scientific gentlemen."

SPITTING OF BLOOD.

Much unnecessary alarm is sometimes occasioned by the issue of blood from the mouth, since the lungs or stomach are considered as the organs furnishing the vital fluid. A close examination occasionally reveals the source in the fauces, posterior nares, or the gums, when, of course, the alarm is greatly moderated, and the means of arresting the hæmorrhage rendered obvious.

Dr. Christian of Dungarvan, has related an interesting case of this kind in the Dublin Journal for March last, of which we shall give a short account. A delicate lady, of middle age, awoke at five o'clock in the morning with what she called "spitting of blood." Some sulphuric acid was given without effect, and Dr. C. saw her at nine a. m. She was pale, but resigned—pulse frequent and firm—the quantity of blood lost was not great—but the decided opinion of all present was, that it came up by *vomiting*. The blood did not appear frothy and florid, as from the lungs, but was coagulated, and part of it dark. In neither of the basins was there any of the contents of the stomach. Supperacetate of lead and opium were given, and no particular examination of the mouth or throat was made till the

arrival of the family medical attendant. The mouth being then washed out, it was discovered that the hæmorrhage issued from the sockets of two of the lower incisor teeth, which were loose. The bleeding was easily arrested, after extracting the teeth. It is probable that part of the blood had been swallowed during sleep, and was actually vomited afterwards.

MONOMANIA.

An instructive case of this is narrated by Dr. Christian, in our Dublin contemporary for March of the present year.

A young unmarried female, aged 20 years, after experiencing some depressing circumstances, began gradually to entertain an unaccountable dread on the score of salvation. This increased to a miserable extent, and menstruation became suspended. A change in the hallucination now took place. She fancied that God had allowed her to become pregnant, as a punishment; and so strong was this idea, that no argument or reasoning to the contrary was of any avail. She ate well, slept well, and was able to attend to domestic affairs. The only symptoms she laid any stress upon was the existence of a *sensation*, general in the system, but more especially in the abdomen. She could not describe it, or liken it to any thing. The mental distress was excessive. A draught of oil of turpentine, and ol. ricini was given, but without any beneficial result. As the period for menstruation was approaching, aloes and myrrh were given every night, and leeches were applied near the pudendum. Pediluvia, frictions, &c. were also applied. Under this treatment the menstruation returned; but there was no abatement of the hallucination. Camphor, valerian, assafœtida, and carbonate of steel were given, with frictions of antimony over the spine. In eleven days after menstruation, she had a release from the monomania. She again menstruated before the regular period—and became free from hallucination.

In the above case our author professes that he was guided by M. Andral in the indications, and by Dr. Graves in the pursuit of those indications. It is supposed by Andral that "the diseased perception points out the seat of the diseased action." But we apprehend that this rule will often fail to guide us. When the fear of damnation predominated in the foregoing case, where were we to look for the seat of the hallucination, except in the brain? When menstruation became suppressed, we had some tangible clue to go by. The restoration of the uterine function could do no harm, and might do good. After all, the *immediate seat* of mania and monomania must be in the organ of the mind, and the question next to be solved is this—does the brain suffer primarily or secondarily? Even in the foregoing instance we have no proof that the amenorrhœa was not consequent on the cerebral disturbance, and not the cause of it. The catamenial disorder succeeded the mental.

DR. ELLIOTSON ON KREOSOTE.

A short account of Dr. Elliotson's paper on Kreosote is given in a recent number of the Medical Gazette, from which we extract the following particulars.

"After some prefatory observations on the importance of attention to the medicinal properties of drugs and chemicals, as a source of light and power in the cure of diseases, the author stated, that having his attention called, early in 1834, to the therapeutic properties of kreosote by reports from foreign sources, he had begun his experiments by administering it to patients whose cases were ascertained to be unmanageable by other means. He first tried it in phthisis and epilepsy, and afterwards proceeded with the inquiry in cases of neuralgia, cholera, diabetes, &c. He usually began with two or three drops suspended in watery mucilage, and gradually raised the dose to ten, twenty, or more drops, until the stomach would no longer tolerate increase; over-dosing producing nausea, vomiting, headache,

vetigo, heat of tongue, fauces, and œsophagus. He found the remedy quite powerless in phthisis, in whatever form, or dose, or mode exhibited. When respired, however, he occasionally observed temporarily increased facility of respiration and expectoration, as, indeed, might be expected; for it cannot be doubted that tar fumes have in some instances proved useful, as in the hands of Chrichton and others. He mentioned that in some instances of bronchorrhœa, or chronic catarrh, he had obtained excellent effects from its inhalation from a solution of five to fifteen drops in about a pint of water, repeated several times daily.

In epilepsy he found little effect of any kind; but from an apparently tranquillizing power which he thought he observed in it that disorder in some instances in irritable subjects, he extended the use of kreosote to hysteria, neuralgia, and other forms of morbid excitability.

CASE I.—A young girl labouring under acute pain in the hypogastrium and pelvis, with various other nervous symptoms, and habitual obstinate constipation. At first the pain, &c. recurred irregularly, but at length every morning between seven and eight, and lasted till night, after which she lay comatose until morning. Her face, gestures, &c. expressed extreme suffering. The evacuations healthy; bladder free of calculus. Every known remedy had been tried before her admission into St. Thomas's. Three grains of morphia relieved her a little every morning, but was soon discontinued as unavailing. July 22d, ordered a drop of kreosote thrice daily. The dose was gradually increased to seven drops. She improved rapidly, and left the house well in a month, having meanwhile regained her flesh and looks.

CASE II.—A man, ill of neuralgia of the nares and palate three months, suffered dreadfully from pain, with sympathetic contortion of the features. He had been ill three years previously, and recovered without remedies. He began with three drops of kreosote three

times a day, August 22d. On the 28th he was taking six minim doses, and was better, the pain recurring less frequently, and his sleep being much less disturbed by its paroxysms. The dose was raised at length to eighteen minims, and he soon got well enough to wish to leave the house.

The author noticed two other cases still under treatment, in which the disease seems nearly cured.

During these experiments the cholera broke out in the hospital, and it occurred to Dr. E. to try the tranquilizing power of kreosote in that *opprobrium medicorum*. In two cases it was exhibited with the effect of stilling the vomiting completely, but without other advantage; these cases likewise proved fatal. They suggested, however, further trial of its anti-emetic power; and the result of his experience was, that he knew of no medicine at all to be compared with kreosote in arresting vomiting, against which he had repeatedly known it succeed after prussic acid had failed. It has proved in his hands equally powerful to arrest vomiting when present, and to prevent it when threatening. In dyspepsia also, characterized by pain, acidity, nausea, &c. he has found it very useful; but he has observed flatulence aggravated by it.

He was led to try it in diabetes, from having accidentally read an account of a case in which it had been successfully administered.

CASE VII.—A country gentleman, of 60, ill four or five years with foul tongue, excessive thirst, and very saccharine urine, was ordered kreosote. On the 10th of September he was making water but seven times in twenty-four hours, instead of fifteen times as in August; his urine contained scarcely any sugar, and he felt himself quite well.

CASE VIII.—A medical man (Nov. 8), ill eight months, made twelve quarts of urine, of specific gravity 1038, per day. Stomach excessively acid; bowels constive. He took kreosote. November 25th, spirits, strength, and general

health, greatly improved, and his amendment altogether surprising.

CASE IX.—A gentleman of 60, six months ill, making six quarts of water in twenty-four hours, of specific gravity 1037, took kreosote. Nine days after seen again; his health much improved. In December his thirst had disappeared, his urine come down to three pints, with proportional general amendment; but the urine still of specific gravity 1037. He has since been heard of, and continues to improve.

Such were the facts of the paper, the incompleteness of which, to a certain extent, the author pointed out, but accounted for satisfactorily from the rarity of some of the diseases, and the novelty of the whole inquiry."

UNIQUE DISEASE OF THE HEART.

This case was observed by Dr. Hanna, and is related in the Dublin Journal for March last. The patient was 31 years of age, and of great bodily strength and activity. He had also lived freely. On the 25th Aug. he received a severe fall on his back from a horse, and two days afterwards felt a beating at the heart, together with nausea. From this period onwards, he was subject to palpitations. He once heard something crack loudly in the middle of the sternum a little to the left side, succeeded immediately by a burning pain shooting occasionally under the scapula and down along the left arm. Afterwards he was seized with such severe palpitation, whilst hunting, that he fainted. He was relieved by blood-letting. When Dr. H. saw him, he was emaciated, and had dyspnoea, orthopnoea, palpitations, distressing dreams, cough, &c. pulse rather small, but regular. Between the second and third ribs, near the sternum "a loud whizzing rush of fluid was heard, with double beat." This was audible throughout the whole region of the heart. The impulsion was greater than natural. Percussion returned a clear sound. The disease made progress—the sense

of suffocation was intolerable—and death took place. The pericardium contained a few ounces of clear serum, and that portion of it reflected over the heart was partially dotted with red spots, and presenting some sheets of lymph. The heart itself was twice or thrice its natural size. “On making an incision from the origin of the aorta along the ventricle to its apex, I opened into a cavity, which I at first conceived to be that of the ventricle, but soon finding my mistake, I removed the heart and took it home, where I proceeded to examine the cavity. It might contain a small orange, and was formed on the external parietes of the left ventricle. It was separated from the cavity of the ventricles by what seemed the inner coat transformed into a thick fibrous membrane, while on the outer wall, the muscular texture of the ventricle was quite effaced, as if by compression. It was lined with shreds of coagulable lymph, which easily peeled off. Just at the summit was seen a small, round, smooth opening, about two lines in diameter, leading at once into one of the sinuses of the aortic valve, and situated about four lines below the mouth of the coronary artery.”

We agree with Dr. H. that the above was an aneurism of the aorta developed in a very unusual place—a lesion to which there is probably nothing precisely similar on record. The aneurism made its way into the paries of the ventricle, and there formed its nucleus or sac.

ORATION DELIVERED BEFORE THE LONDON MEDICAL SOCIETY, March 9th, 1835. By WALTER DENDY.

We had not the pleasure of hearing this oration, when delivered *viva voce*, but we heard ample encomia passed on it, at the subsequent dinner of the Society. We now have it before us, and can safely say that it is a composition that does great credit to the talented and well-informed orator.—Perhaps it may be remarked by some

fastidious critics that the composition is too highly wrought—too full of tropes and figures—and abounding too much in erudite quotations. These, after all, are very venial faults—but in an ORATION, they are not only pardonable, but almost necessary. The matter, however, is that to which we look with most interest, and we think it exceedingly good. We shall make a few extracts to enable our readers to judge for themselves. After taking a rapid historical glance at the origin and progress of medicine, he thus alludes to “those points which tend to control, to foster, or to vitiate its influence.”

“If we reason abstractedly, no one will be so bold or blind as to express his regret at the diffusion of knowledge; but it may be doubted if extreme facility of acquirement always administers to the benefit of society, if the profusion of lecturers whom the crowded ranks of the profession often drive to that source of emolument in default of practice, do not increase the evil they complain of, and commit a species of professional suicide.

I will not assert that in mechanics and in medicine there is an analogous law, that the gain in celerity or space is a loss of power, but at least there is in the latter this impediment—superfluity of numbers. Does the honey-bee seek its balmy treasure in those gardens where the swarm of locusts had alighted—the leaves and blossoms of which they had devoured? and will not this superfluity (although the schoolmaster, who is abroad, may brand my assertion as illiberal) blight the hope of remuneration for expenditure and laborious study?

Let me be understood. If the Profession were not glutted with embryo practitioners, if professional success bore an exact ratio to professional attainment, I would not venture to argue as I do. But is it not a fact, that the precincts of Bridge street have been deluged by applicants, who jostle each other like lacqueys in a lobby, and rush with the ardour of an Olympic struggle, for the privilege of gaining—what? the post of professional drudgery, and that for a miserable pittance, compared to

which the wages of the powdered coxcomb in the hall of affluence were a princely revenue. Can I heighten this picture? Yes, I will place before you the accomplished child of genius and of study, whom disappointment has rendered up a prey to melancholy and despair—his hope blighted—the mine of learning within him unexplored and useless—his life a blank. We may meet him, perchance with pale and haggard visage gliding slipshod through the streets of this metropolis, a beggar—or with a sensitiveness closely allied to genius, shrinking with instinctive dread from the disclosure of his penury, and at length, like Savage, and Otway, and Chatterton, (but more wretched still than these, for they had the golden rays of poesy to illumine *their* dying hour,) yielding his miserable life within the walls of a hovel or a prison. This is no exaggerated picture, it is sketched from the life; and yet, with these truths before us, there are some who would open still wider the door to these miseries, who even advocate unrestricted practice, opposing all attempts to raise higher the scale of professional education by which alone this mighty evil can be checked.

And is the proposition of the high curriculum a recent innovation? In so remote an æra as the eleventh century, the school of Salerno, founded by the Duke of Normandy, decreed a test of attainment as severe, according to the existing knowledge as now; and in the reigns of Maria Theresa and Joseph II., five years of study and severe examination were essential for the degrees of Doctor in Medicine or Surgery, the only legalized practitioners in Germany.

Then, the Pharmaceutical Association of Great Britain, enrolled in 1794, represented the necessity of a higher grade of education, but their bill was strangled in its birth. In adherence to the wish of this Association to appropriate to themselves all compound pharmacy, its principle was vitiated. Thus ran the preamble of their petition: "As the apothecary necessarily attends patients without any emolument but what arises from the profits of the medicines he may vend"—

By this preamble, which truckles to the system of remuneration for goods delivered, the vendors of physic excited the jealousy of opulent and successful rivals. This fallacy, this anomaly in principle, was the ruin of their petition; it emasculated the practical clauses of 1815, and I fear it will undermine the basis of any attempt at improvement, so long as an actual identity of the science and the trade is fostered by the profession, and winked at by the legislature."

The foregoing picture of the distress in which hundreds of medical practitioners are plunged, in consequence of the over-crowded state of the profession, is scarcely exaggerated. We every day see such melancholy effects of a redundant medical population!

Mr. Dendy very properly denies that a high scale of education drives students to foreign schools. "A protecting duty against the importation of knowledge could only emanate from the barbarity of the dark ages, shrouding half our wisdom, and destroying those sacred links of fellowship, with which peace has united the scientific world."

We are unable to give more than one other short extract from Mr. Dendy's oration.

"From this point springs a subject which has been regarded with no slight suspicion, and which I, above all others, must approach with diffidence—the system of *levelling upwards*.

With sincere courtesy I ask this question—What is the present relative condition of the Profession? It is true that, in the nooks and obscure crannies of this metropolis, we here and there stumble on one of the ancient stanch apothecaries, whose shelves, like his of Mantau, are decorated with

"Green earthen pots, bladders, and musty
seeds,
Remnants of packthread, and old cakes of
roses."

But such an association is itself a libel on the present fame of the worshipful Company, which enrols among its members men, whose learning and whose wisdom would not quail in argument before a senior wrangler hot from Cambridge.

The surgeon, once the lowest grade of all, although no station has yet been awarded him in the courtly order of precedence, has long since emerged from his chrysalis state.

The memory of Hunter—of Cline—of Home—of Abernethy, will live while science lives; for they have contributed to elevate the study of a mere manual art into a sublime and beautiful philosophy. And here I shall only echo the sentiment of all who hear me, if, for a moment, I lament with France the loss of him who was so lately one of her chief ornaments and blessings—Dupuytren. Whatever his eccentricities—his errors—his life was one unremitting course of scientific labour; and he has left a proof, more impressive than any the storied urn can record, of his ruling passion strong in death, in the splendid legacy of 500,000 francs, the endowment of a lectureship, and an asylum. Taught by similar bereavements of her own, Britain has learned to sympathize with all her sister nations; and with sincerity and regret she will bestow her eulogy and her tear over the grave of the illustrious Foreigner!

From the living lustres of surgery I will not presume to select; but for whom, I may ask, is the high scale of study more essential than for him whose practice is attended by extreme danger, and whose failures are so fearfully exposed to the ordeal of public scrutiny. The practice of physic is the sailing on a calm and summer sea—that of operative surgery on a dark and stormy water. The stigma and the penalty of *mala praxis* are fixed on the slightest errors of a surgeon, which his more learned brother escapes, for he is sworn on the Rubric to practise *tuto, cito et jucunde*, and happily the secrets of their prison-house are not often unfolded by the hepatic, the cardiac, or the pulmonary tissues.

Believe not that I speak thus in the spirit of invidious distinction, in prejudice of those Corinthian pillars of science which support and adorn the most learned college. This were to place one rank in array against the other, not in the pure and goodly

fellowship of scientific ambition, but in the vain aspiration to mere *cere-monial* honour, the “whistling of a name.” No: I will rather hope for that conciliation of the classes which shall destroy this many-headed Hydra of Distinction, which may constitute a fellowship not merely of this college or of that, but a fellowship of science—that the olive branch of peace may entwine round the staff of Æsculapius, and the broken shaft of Machaon.

Is this union of practice a speculative novelty?—No; I might revert for refutation to the reign of Henry VIII.—I might cite the instances of Winslow—of Harris—of Harvey. I may refer to the practice of more modern surgeons, and to the declaration of scientific physicians of the present day before the Parliamentary Committee; and, may I add, that such union would release us from the dilemma of the French monarch, who, being urged to place a barrier between the physician and the surgeon, shrewdly inquired on which side he should place the patient?

And is this equalization?—No. The tree of learning, like that of the forest, requires not a variety of strata in which to strike its roots, but its *branches* are not all of equal length—its flowers and its fruits not of equal beauty and flavour. Nor is equality of artificial growth; the manufacture of an edict or a law. These may confer title—they cannot ensure fame; for study and wisdom and age will still be honoured, still be sought for, though uncherished by courtly favour, though unadorned by the tassels of a college robe.”

There is much truth in the foregoing observations, however they may be sneered at by the proud aristocratical members of the Profession. Those who scorn the idea of “levelling upwards,” may live to see the day when they may acknowledge that it is a much better system than that of “levelling downwards.”

OBSCURE PERICARDITIS—DILATATION OF THE HEART—ŒDEMA OF THE FAUCES, &c. BY SAMUEL JACKSON, M.D.

"Mr. ———, aged fifty-four years, temperament sanguine nervous; previous health generally good; had suffered in former years attacks of acute inflammation of abdominal viscera; had been actively engaged in business for many years, and exposed to great mental anxiety; habituated to the moderate but daily use of spirituous drinks. In the commencement of January 1834, he returned from a fatiguing journey of twelve hundred miles, during which he was exposed to severe cold, especially in crossing the Alleghany ridge. From the state of the roads, the stages could not run, and anxious to reach home, he travelled across the mountains in an open mail cart. He suffered severely from the cold and violent jolting, the vehicle being without springs.

After reaching home, he complained of excessive fatigue, kept in bed for two days, took some medicine without advice, and resumed his accustomed pursuits. He kept about, complaining frequently of shortness of breath when ascending stairs, of being easily fatigued, and often sighed deeply. This last circumstance was attributed to mental causes, at the time, as his affairs were not in a very satisfactory state. On the 29th of January, I was requested to see him. The night previous he had been out on a visit, complained of being cold and fatigued when walking home, and in the morning felt too unwell to get up. I found him complaining of cough, with sense of oppression in the chest; he had no heat of skin; the face peculiarly pallid; pulse exceedingly feeble and frequent; the chest every where resonant on percussion; the respiratory murmur pure in every part of the chest, gave no indication of pulmonary affection; the action of the heart rapid, its sound feeble. A blister was directed to the chest, with a composing cough mixture.

The next day, 30th, he felt relieved; the oppression diminished.

Feb. 1st.—Had passed a restless night;

indescribable feelings in the chest; skin cool and shrivelled. Directed emulsion of assafoetida, with acetat. opii.

2d. Night again restless; skin cold, pallid, face waxy aspect; great anxiety; the chest again examined, furnished same pulmonary affections; the heart alone seemed affected; the pulse irregular, so rapid as scarcely to be counted; the sound of the heart feeble and indistinct; the organ appeared to labour; no morbid sounds; head remarkably clear; stomach in excellent state. In crossing the mountains he had used stimulants more freely than usual, and suspected his present exhaustion might proceed from their sudden withdrawal. The suggestion was adopted, and warm toddy, with carb. ammoniæ prescribed. 12 M. Same state. 3 P. M. Has rallied in some measure; skin warmer, and feels more comfortable. 8 P. M. Skin still warmer, dry; pulse has more force. Continue stimulants.

3d. Night more tranquil than preceding; had one sinking spell, almost approaching to fainting; examination of the chest presented some indications as before, both as to the lungs and the heart; has a sense of extreme prostration and debility. When lying with his head low, the face is purple, from the stagnation of the venous circulation; when it is elevated, it immediately becomes pallid. The veins of the extremities very much distended, and cannot be emptied by pressing upwards along their course. Senses and intelligence are perfect; stomach in excellent condition; bears the stimulants administered every half hour perfectly well; sinapism applied along the spine; blister over the region of the heart, and on the lower extremities; calomel gr. i. every hour. No change occurred during the day. When the stimulants are withheld, the sense of sinking and disposition to fainting comes on. The stimulants were administered every half hour. No other effect apparent than to obviate the tendency to fainting and sinking. At 10 P. M. Tinct. opii. gtt. xxv.

4th. In the night had one sinking spell: this morning pulse rapid, irregular, and without force; hands pur-

ple; respiration made with considerable muscular effort; had a natural evacuation in the night; tongue moist and clean; sense of extreme exhaustion; mind clear; had the morning papers read to him; stimulants continued, with nourishing soups. 5 P. M. Had during the day several fainting and sinking spells; is then covered with cold sweats; pulse scarcely perceptible. The following mixture prescribed:—Sulph. quiniæ, gr. xij.; Elix. vit. 3ss.; Syrup zingiberis, 3ss.; Aq. fluvial, 3iss.; one drachm every hour. Stimulants continued. 10 P. M. Appears to have rallied in some measure; fingers less purple; pulse more distinct.

5th. A more tranquil night; has a feeling of more force; circulation improved; had the newspapers read to him this morning; is constantly in semi-erect position supported by pillows; stimulants diminished one half; nourishing soups. 10 P. M. Has continued in better state during the day.

6th. Disturbed in the night by a fire that occurred in the vicinity; was much agitated, and lost his sleep; the disposition to sinking and fainting was renewed and increased; stimulants again resorted to and increased; had three passages during the day, each perfectly natural; rallied in the day, and had augmented thirst; stimulants withdrawn entirely, and small pieces of ice held in the mouth to allay thirst.

7th. Rested well; has more force; has used no stimulants during the night; tongue has become red, with white fur; thirst increased. In evening prostration; respiration laboured; pulse fluttering; solution of sulph. quiniæ and toddy renewed. 10 P. M. No improvement; carb. ammoniæ and wine-why.

8th. Restless night; but little change; tongue moister; had three stools in the night, all natural; pulse small, feeble, irregular; veins turgid with blood that cannot be forced along them; respiration hurried, and irregular; stimulants continued; frictions on the spine, with ol. succin. R. Spts. camph.; ol. terebinth. and ol. succin. m. j. every two hours.

9th. Tolerable night; symptoms nearly the same; has appetite; stimulants withdrawn, except spts. Camphor, m. ij. every two hours. Evening. In same state.

10th. In the night became hoarse, with feeling of soreness in the throat; an obstruction there causes difficult respiration, and nearly prevents swallowing. On examining the throat, the whole fauces were tumid; the uvula swelled and thickened; the velum and soft palate pressed down like an inflated bladder; very slight redness; skin warmer than it has been, and pulse possess more force. Sinapised poultice applied to the external surface of the throat; gargle of infusion of Cayenne, and a solution of iodine alternately used every fifteen minutes; punctured the swelled and tumid velum; a thin fluid oozed from opening. 1 P. M. Difficulty of respiration and suffocated feeling increased; applied saturated solution of nitrate of silver to the fauces, and again punctured the swelling; swallowed some wine gruel with tolerable ease, and had appetite. 4 P. M. Swelling of fauces greatly augmented; respiration suffocating. The danger of suffocation had become so imminent I sent for a surgical friend to perform tracheotomy as the only resource, and in the mean time punctured freely the tumour, filling up the fauces. A thin bloody fluid issued in large quantities, but without relief. Suffocation progressed every instant; longer delay was inadmissible, and with no other instrument than a pocket scalpel I attempted the operation. On making the incision through the skin, a thin bloody serous fluid was found existing in the cellular tissue, from which it discharged in a copious stream. A small opening only was accomplished in the trachea, into which the infiltrated cellular fluid was sucked in inspiration. Suffocation was completed, the patient's head fell over, the face bloated and blackened, and in a moment he expired. Half an hour only had elapsed since I had entered the room, so rapid had been the progress of the œdematous effusion."

The body was examined twenty-four hours after death, in the presence of

Drs. Jackson and Godhard. The anterior portion of the throat presented a mulberry red colour, and, on making an incision along the front of the larynx, a copious flow of dark bloody serum took place. This effusion extended deep about the parts—viz. the larynx and neighbourhood. On examining the thorax, the pericardium was found glued to the diaphragm, and contained about two ounces of straw coloured fluid. It was lined by a false membrane, one or two lines in thickness, in some places. The surface of the heart was rough and of a yellow colour, covered also by a false membrane. The right auricle was considerably dilated, and its parietes thickened. Several small tumours were found between the muscoli pectonati, varying from the size of a pin's head to that of a large bean. They were attached either by a narrow pedicle, or by small cords, and, when cut open, were found to consist of a reddish grey semi-fluid mass, resembling disorganized blood. The capsules seemed organized. The right ventricle was filled with a black coagulum extending into the pulmonary artery. In this cavity also was found a group of the same kind of tumours. The left auricle was dilated and its parietes thickened. No tumours in this cavity. The left ventricle was dilated without hypertrophy, and in its cavity some of the tumours were also found, one of which was as large as a walnut. The lining membrane of the aorta was covered, to some distance, with a layer of coagulable lymph, half a line in thickness, and of recent formation. The subjacent tissue was highly inflamed. The pulmonary artery presented the same appearance. The abdominal viscera were sound. The brain was not examined. We give the following observations and reflections of the narrator.

"In the foregoing case a circumstance of interest also was present. Acute pericarditis existed, as was ascertained by the autopsy. But during life it was manifested by no positive diagnostic signs. The irregularity of the contractions of the heart existed wholly independent of pericarditis. I

saw a gentleman in a consultation visit this spring, whose heart acted in the most irregular manner, with very feeble contractions. He died soon after quite suddenly from apoplexy. The pericardium, whose inflammation I had suspected to be the cause, was reported to me to be healthy, but the substance of the heart was softened, and an ulcer existed in its parietes.

In this case no fever, or acute pain, the common attendants on acute pericarditis, were present. The mind too so often disturbed with agitating fears in that disease was perfectly calm and tranquil. From the obscurity of the symptoms I felt entirely at a loss to determine the true diagnosis of the affection. A cardiac lesion was evident, and a difficulty in the course of the circulation was apparent, but the precise nature of either could not be determined.

On a review of this case, I feel at a loss in deciding whether it would have been a preferable course to have attempted blood-letting for the relief of the circulation, notwithstanding the strong evidences of debility, instead of stimulating. From the apparent effects of the stimulants, they were indicated. The symptoms were lightened, and before the effusion occurred, a very positive amendment had taken place. But was not the effusion one of the effects of the stimulants? Yet why should their action be so local as to affect exclusively the throat? These questions it is difficult to solve.

Aortitis also existed in this case, yet no signs were present to indicate its existence. The pulse in this form of disease is usually tense and hard. The irregularity and feebleness of the heart's action may have controlled this symptom, usually produced by arteritis.

The immediate cause of death appears entirely unconnected with the cardiac lesions. The symptoms originally present, and indicative of disease in the central organ of the circulation had been yielding; a decided amelioration had taken place, when without any assignable cause, the oedematous condition of the fauces and neck, ensued, extending to the larynx.

That the cause was local is evident from the œdema having been limited. In the external cellular tissue the effused fluid was deeply coloured with blood.

I have met with several cases previous to this, of œdema of the fauces of a lighter degree, and producing very suffocative respiration, showing its extension to the glottis. They all recovered. This is the first instance I have seen of the disease in a fatal form.*

THE SPHYGMOMETER: AN INSTRUMENT WHICH RENDERS THE ACTION OF THE ARTERIES APPARENT TO THE EYE, &c. By Dr. JULIUS HERISSON.—Translated from the French, by Dr. E. S. BLUNDELL. Octavo, pp. 46, 1835.

The profession is well aware that we were the first in this country to hail the stethoscope; and the event has not done discredit to our penetration on this point—however dull we may be, in general, as to our perception of the useful or ingenious. We pledge our reputation for sagacity, that the SPHYGMOMETER is one of the most silly and ridiculous baubles that was ever attempted to be foisted on the attention of the profession. A complicated apparatus to be fixed on the arm, or on the chest, to indicate the action of the heart and arteries—an action that will vary from Alpha to Omega while the apparatus is being applied, and which, after all, will not convey one-hundredth part the information to the *experienced* practitioner, which the finger will indicate! To the *inexperienced* it will only prove an ignis fatuus, and lead him into “sloughs and ditches.” We will not insult the good sense of our readers, or waste our own time, in any attempt to break this butterfly on the wheel of criticism. The following description of the *apparatus*, which the English translator has added to the original Gallic

bauble, will be quite sufficient for its exposure.

“The Apparatus must be made as light as possible, either of silver, ivory, or steel; it acts somewhat on the principle of a screw-pincushion, which it slightly resembles in shape; it is fixed upon the arm, in the same manner as the pincushion is made fast to the table, viz. by a spiral screw; this screw has upon its point a tabular circle, which being free, moves independent of the screw, and allows the latter to be regulated without disturbing the former, when in contact with the wrist, whilst the instrument is being adjusted over the artery.

The Sphygmometer is passed through an orifice or slit, prepared for its reception at the end of an arm, of an elliptical form (being round at the upper, and quite flat at the under surface), to prevent it from turning round;* this arm slides horizontally into an aperture, which is adapted with the utmost nicety to receive it, and possesses the advantage of being adjusted at any point to which it may be required, by means of a small screw placed vertically over it, which, when turned, firmly fixes the arm of the Apparatus into the aperture, and prevents it from advancing or receding, except at the will of the operator.

That part of the Apparatus containing the aperture, into which the horizontal arm slides, is placed perpendicularly, and is made to connect the lower part of the Apparatus with the upper by a spiral screw, which, when turned, either increases or diminishes the distance between the base of the Sphygmometer and the tabular circle.”

Whoever has visited the Falls of the Rhine must have been very much amused by an exhibition on the banks of that noble river, which shows him,

*“The first idea which suggested itself to me was, to have the Apparatus made on the principle of a Bracelet, but the great difficulty of keeping the Sphygmometer in a vertical position induced me to abandon it.”

* American Journal of the Medical Sciences, No. 30, Feb. 1835.

on a diminutive scale, and by means of a complicated apparatus, the majestic fall of water in a chrystal mirror:— This, too, when he has only to throw up the sash of the window, and see the original in all its glory, within five hundred yards of him!! Such a Lilliputian display, however, is philosophy itself, compared with the Sphygmometer—a complicated piece of machinery for *seeing* the pulse, when it can be *felt* by the finger—the touch in this case, as in many others, being a thousand times less deceptive than the sight. But enough of the bauble.

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CORONER'S INQUEST ON AN INFANT
WHOSE HEAD WAS OPENED TO SAVE
THE LIFE OF THE MOTHER.

A very disgraceful scene of this kind recently occurred in the Sister Isle. A female, Mrs. Fin, was in labour two or three days, under the care of a midwife—Mrs. Goolding. At length Surgeon Hayden, of Dublin, was called in, and finding the woman sinking, without prospect of delivery either by Nature or the forceps, proposed *embryotomy*. The husband would not consent for a long time, but at last did consent, and the mother's life was saved. It appears very clearly, from the minutes of a coroner's inquest, that some jealous professional neighbor, whose name we shall pass over, instigated the said inquest, by circulating unfounded and malicious reports, injurious to the character of Mr. Hayden. The unworthy object was not attained, and the disreputable motives were signally disappointed. The jury brought in a verdict highly gratifying and honorable to Mr. Hayden—first, that the child was, most probably, dead before the operation was performed—and secondly, that, had it been otherwise, the operation was absolutely necessary to save the life of the mother. They also attested to the skill, humanity, and judgment of the traduced member of our profession—Mr. Hayden. We hope this will be a lesson to those narrow minded and invidious individuals, too numerous in the ranks of

our profession, who would not hesitate to ruin the reputation of a contemporary to gratify their own spleen and malice.

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CURIOUS CASE OF PARAPLEGIA. By
Dr. WADDELL, of the United States.

Mr. H——, a distinguished lawyer of Athens, Georgia, died in the month of October, 1830, affected with paraplegia. He was rather tall and spare in person, pale in complexion, phlegmatic in temperament, and at the time of his death about thirty years of age. None of his family, ascending, descending, or collateral, have ever been peculiarly disposed to hereditary disease; indeed they are said to have enjoyed remarkable immunity from all kinds of chronic disorder. Before his marriage, about the year 1823, he was studious and sedentary in his habits; after that event he became more active.

It was about this time that he began to complain of cardialgia, nervous headache, pain at the point of scapula, and possibly some other symptoms of derangement in digestion. Two or three years afterwards, whilst on the circuit, attending one of the upper county courts, he slept in very damp sheets, and had all these symptoms highly aggravated. From this time onward, dyspepsia and hypochondriasis, with their ordinary accompaniments, made silent but constant progress. In April, 1829, he found himself somewhat wanting in ability to void the contents of his bladder; and this was the first symptom of paralysis. It may be proper to remark, that hitherto his bowels had acted well, and that he was not at all troubled with pain, either in the epigastric or hypochondriac regions. In August he first remarked that he was losing sensation in the soles of his feet, and this was followed by a similar loss in the calves of his legs, numbness of the thigh, and weakness of the lower limbs generally. Being a candidate for the state legislature, he attended the election at the County Court House, seven miles from home, about the first week of October. Here his strength

was much exhausted by the exercise, and the excitement which probably attended on a successful canvass. Riding home on horseback the next day, he was seized with pains in the lower part of his spine, and spasms in the neighbouring muscles. He now soon lost sensation and motorial power in both of his lower extremities to a great degree. The temperature of his diseased limbs was variable.

Just at this period, the author of this essay was requested by his family physician to see him. He had been taking some aperient and alterant medicine, and no particular change being instituted in the treatment, he shortly determined on being carried to Milledgeville, a distance of seventy miles, to meet the State Medical Board as a council on his case. On his way, an application of tartar-emetic ointment was made to his legs, which produced very angry effects, and threatened something like gangrene.

Being arrived in Milledgeville, he underwent a course of treatment for fever, with which he was attacked, and had two issues established in his back by the council called to him. This was followed by immediate melioration of his symptoms, and onward from that time, an indefinite number of issues were kept discharging until within two months of his death.

His absence from home amounted to five weeks, at the expiration of which time he was brought back, apparently much improved in general health. His appetite in the course of a week became very vigorous, soliciting food of the strongest kind. Some indulgence of this propensity invited a return of his fever, but no symptom of moment appeared until February of 1830, when he was seized with universal muscular spasms of a very severe character. Colic, throughout the whole of his illness, was one of his most distressing symptoms, and this was accompanied by a great evolution of gas, and so much spasmodic uneasiness, as to threaten the extinction of life. For this he commenced the use of laudanum as the Spring advanced, and gradually increased its dose until

within a few weeks of his death in October, at which time he would take as much as two ounces and a half in 24 hours.

A visit to a chalybeate spring in May, did not materially benefit him. Great emaciation of the lower extremities, together with permanent tonic contraction of the flexor tendons of the toes came on, and paralysis gradually extended upwards until July, when sensation became dull as high as the xiphoid cartilage in front, but not so high on the posterior part of the trunk. During the Summer his bowels were irregular; the power of the sphincter ani was lost, and also the sensibility of the rectum, as high as the sigmoid flexure of the colon. He received intimation of an approaching alvine discharge, by a sensation in his bowels similar to what might be expected from warm water passing through them. He sometimes had power to retain and void the contents of his bladder ad libitum; at other times all control of the vesical sphincter was lost, and the urine was discharged involuntarily. It was sometimes bloody, at other times it came away mingled with long shreds of mucus; during the latter part of his life, it consisted in a great measure of pure blood.

His treatment under the care of Dr. Linton, for the last two months of his life, consisted in drying up his issues, regulating his bowels with sulphate of alumine, calcined magnesia, &c. &c. Infusion of hops was substituted for tincture of opium, and the latter article was withdrawn entirely, so far as practicable. Moxibustion was instituted on his spine, feet, and knees. To the use of the latter remedy, there succeeded a development of very obscure sensation in the sole of one foot, and in the ankle of the opposite limb, together with a perceptible relaxation of the flexor tendons of the toes.

Three weeks previous to death, a pain commenced in the right hypochondrium, attended by some spasmodic movement of the corresponding external part, which was intermittent in character. Seventy-two hours before death, there issued from his bowels a

profuse sanguineo-purulent discharge, followed by great prostration of vital power, inability to swallow, dimness, of vision, and death, in the entire possession of every intellectual faculty.

The body was examined in the presence of Drs. Linton, Jones, Tinsley, and Waddel. The body was exceedingly emaciated. The bones of the spine were sound—as were the spinal marrow (lower part) and its investing membranes. The stomach was partly filled with a fluid resembling dark blood, but tinged with cystic bile. The mucous membrane was inflamed, as was that of the intestines, over which a quantity of loose purulent matter, of a yellow hue, was found floating. This proceeded from a perforation of the duodenum, about half an inch in diameter. The heart was remarkably small in size; but there was nothing else remarkable in the thorax.

The narrator apologizes for the imperfection of the foregoing dissection. They had not time or permission to examine the head. The author goes on to raise a theoretical edifice on this case, which never can stand against the slightest breeze of correct induction. He *imagines* the head was not affected because there was no disturbance of the mental functions—and he *imagines* that the sympathetic nerve was the seat of the paraplegia, or at least of its cause, though said nerve was never examined. If we must rest on conjecture, where actual examination ought to have obtained, the great probability is, that the seat of the disease was in the head, because it has been found there often in cases of paraplegia, according to the testimony of Baillie, Abercrombie, and others.

MEDICAL TUITION.

The following circular has been issued by the principal teachers of Bartholomew's Hospital, addressed to their colleagues in the British metropolis.

"The undersigned medical officers and teachers of St. Bartholomew's Hos-

pital beg to address their colleagues in other hospitals and schools, on a subject of paramount importance to their common profession.

The immense advantages which London possesses, for scientific and practical instruction in medicine and surgery, have rendered it the great resort of British medical students; hundreds of whom repair every year to the hospitals and lecture-rooms of the metropolis, in search of that information which is to qualify them for the exercise of an arduous profession.

It appears to the undersigned, that neither the profession nor the public derive the full benefit of these advantages, under the present plans; and hence that it is expedient to revise the method of proceeding, in order to the adoption of such changes and regulations as may render the course of medical study more efficient.

The whole business of medical education, so far as lectures are concerned, is transacted within seven months—from October to April inclusive. During the same period, the majority of students attempt to accomplish also the important object of practical study at the bedside of the sick. Two sessions are usually devoted to medical studies in London.

The consequence of these arrangements is, that so many courses of lectures on the various branches of professional knowledge are going on together, as to fatigue the attention and confuse the mind of the student, leaving him no opportunity for more than a casual and interrupted attendance in the wards of the hospital.

This evil would be considerably lessened if the five months that remain after the close of the medical session were devoted to practical study; which might then be pursued without interruption. But it is the custom for students to leave London when the lectures are ended, and not to revisit it till the beginning of the following session.

It must be obvious, that under such a system, in which the whole course of efficient instruction, both oral and practical, is crowded into the inadequate

space of fourteen months, the best objects of medical education never can be attained.

The undersigned beg to propose for consideration the following plan:—

1. That the medical session should consist of ten months—from October to July inclusive; leaving August and September for the vacation.

2. That the medical session should be divided into two equal periods, and that an equal distribution of the lectures should be made between these.

The hospitals would be open to students throughout the year, and clinical instruction would proceed constantly. The spring and summer being the most favourable time for attention to hospital practice, this portion of the year would probably be thought most appropriate for lectures on practical subjects.

The undersigned are aware that a change so extensive as that now proposed, could not be adopted by any single school without great risk of failure. They therefore recommend the subject to the consideration of the physicians, surgeons, and teachers of other hospitals and schools, with the hope that some common plan may be devised for rendering the system of medical education in London more suitable to its great objects.

(Signed) P. M. LATHAM, M.D.

GEORGE L. ROUPELL, M.D.

GEORGE BURROWS, M.D.

HUGH LEY, M.D.

FREDERICK FARRE, L.M.

WM. LAWRENCE, F.R.S.

HENRY EARLE, F.R.S.

EDW. STANLEY, F.R.S.

THOMAS WORMALD.

St. Bartholomew's Hospital,
April 13, 1835."

Advocating, as we have always done, an extension of the curricula of medical education, as the surest means of enhancing the character of the profession, and promoting the weal of the public, we need hardly say that we approve of every measure that tends to this object. But we do not think that the foregoing extension of the medical session is sufficient—though certainly an improvement on the present plan. Three years

at least should be dedicated to the elementary study of so difficult a profession as ours, and we hope soon to see a regulation that will enforce even a longer range of study than that. We understand that the Apothecaries' Company have actually agreed on a regulation of this kind, with a similar or nearly similar extension of the academic session. We do not participate in the apprehensions entertained by our contemporary, the Medical Gazette, that this new edict from Blackfriars may, "by raising the standard so high, incur the risk of placing the commodity beyond the reach of the less opulent." The poor will always have plenty of medical practitioners to attend them gratuitously—were it only on account of acquiring practical information. But even if we granted that a few should suffer from want of medical relief, (which, however, is a mere gratuitous supposition,) is that any reason why the standard of medical education should be below the proper level? How many thousands daily suffer from this cause at the present moment! Make the article *good*, say we, even at the expense of its being somewhat dear. Better that a few should have no physic at all, (of which there is little to fear,) than that all should swallow bad physic.

MIRAGE.

"Nowhere (says Lieut. Burnes) is that singular phenomenon, the *Mirage*, or *Surab* of the desert, seen with greater advantage than in the Run, (near the Indus.) The natives aptly term it smoke; the smallest shrubs at a distance assume the appearance of forests; and on a nearer approach, sometimes that of ships in full sail, at others that of breakers on a rock. In one instance I observed a cluster of bushes, which looked like a pier, with tall-masted vessels lying close to it; and on approaching, not a bank was near the shrubs to account for the deception. From the Run, the hills of Cutch appear more lofty, and to have merged into the clouds, their bases being obscured by vapour.

'The wild ass is the only inhabitant of this desolate region; they roam about in flocks, 'scorning the multitude of the city, and make the wilderness and barren lands their dwelling.' Their size does not much exceed that of the common ass, but, at a short distance, they sometimes appear as large as elephants. While the sun shines, the whole surrounding space of Run resembles a vast expanse of water—the appearance it commonly assumes—and which is only to be distinguished from real water by those who are long habituated to such visionary illusions. When the sun is not shining, the Run appears higher at a distance; but this has been remarked of the sea, and other extensive sheets of water, and is also to be accounted for in the deception of vision.'*

INTUSSUSCEPTION WITH STERCORACEOUS VOMITING, SUCCESSFULLY TREATED BY INFLATION. BY J. WOOD, M.D.

Mr. G. aged thirty-five, a type-founder, of nervous temperament, was suddenly seized, on the night of September 17th, with violent pains in the umbilical region: has before suffered two slight attacks of rachialgia. A medical gentleman in the neighbourhood saw him, and prescribed purgatives and hot fomentations. My attendance was requested the next night. He had obtained no relief from the remedies administered during the day; stomach had rejected them. No defecation for three days; frequent retching; little intermission from pain; pulse: small and regular. Superficial examination of the abdomen detected no peculiarity. An acquaintance with his previous attacks led to the presumption that the present was painter's colic: he was, therefore, directed to take a pill containing two grains of opium, and one drop of croton oil every two hours till relieved; and to have an enema every

four hours, and bags of hot sand to the abdomen.

Sept. 19th. Has taken all the pills; less pain through night, but since day-break paroxysms have returned with greater force and frequency, accompanied by violent tormina and tenesmus; dry retching, especially after taking drink; hiccup; slight but general tenderness of abdomen; pulse irregular, irritated; no fecal evacuation, but discharged in the course of the day a little bloody mucus, and vomited, towards night, a large quantity of green bile mixed with feculent matter. After a careful examination, the precise point of obstruction was ascertained. At first, only an unusual fulness and firmness in right iliac region could be discovered: but the hand lying upon the spot, a paroxysm of pain occurred, and an elongated tumour was felt to rise with an erectile motion: immediately there followed a gurgling rumbling noise, and a rush of fluid downwards against the point of obstruction. After two or three surges against the tumour, the fluid receded towards the stomach; but again returned with renewed violence, until the spasm subsiding, it passed upwards, the bowels taking on an inverted action. The treatment adopted was copious bleeding, the administration of purgatives, as calomel, infusion of senna, castor oil, enemata of tobacco infusion, hot anodyne fomentations, and at night large doses of opium.

20th. Aggravation of all the symptoms. In the afternoon Dr. Morrill saw him, and after a careful examination of the case, and an acquaintance with the treatment pursued, he agreed in opinion that there were no grounds for hope. As a last resource, however, he proposed inflation of the bowels with atmospheric air. Placing the patient on his right side, the pipe of a pair of bellows was introduced into the rectum, and inflation cautiously began. This succeeded but partially, owing to the imperfection of the instrument; yet to our surprise, he proclaimed himself much easier, and was irresistibly driven to the commode, where he passed a large quantity of air and a gill of

very fætid, bloody water. A more perfect pair of bellows having been obtained, the tube was again inserted, and inflation employed till the abdomen became tense. He had no recurrence of violent pain after first inflation. Directions were given him to remain quiet in bed, and resist the disposition to evacuate the bowels, to take one drop of croton oil every two hours, and at the end of four hours an enema of mucilaginous fluid. He was visited six hours afterwards; had had no return of pain since inflation: within last hour two copious dejections.

21st. Had seven dejections since last visit; quiet sleep for three hours; somewhat feverish, thirsty; countenance anxious; pulse 125, small; tongue red, dry in centre. Full vesication from blister applied yesterday. Pretty severe enteritis followed, which yielded to the usual remedies in the course of fourteen days.

The result of this case was extremely gratifying. With regard to the treatment finally employed, we had no very sanguine anticipations of success; yet it must be admitted, that there is more philosophy in it than in many other plans adopted to lessen the ills of life. Of the numerous enemata administered in the forty-eight hours preceding the inflation, but a small quantity was retained, and that but momentarily. The use of them was persisted in with the hope of effecting mechanically the dilatation of the gut. In similar cases, the enemata cannot be thrown up to any amount: what is injected immediately returns. The effect is totally different when air is used. Its levity, its freedom from all irritating qualities, its elasticity and expansibility, give it a decided preference over the enemata. The nature of the difficulty, also warrants the view of its utility. The tendency of the peristaltic motion and of the ingesta, is from above, downwards; most cases of intussusception, therefore, are *progressive*, few *retrograde*. If then, we can dilate the stricture, the invaginated portion will escape from below upwards, and thus will be restored to its original situation. If the above explanation be correct, what remedy can

compete with inflation? It certainly merits a trial, and is earnestly recommended to the consideration of the profession.—*Boston Medical and Surgical Journal and Med. Mag. Dec. 15, 1834.*

PREJUDICES AGAINST FISH.

It appears from Lieut. Burnes, the author of very interesting travels in the East, that some of the oriental nations, and especially the *SINDIANS*, entertain a very unfavourable opinion of *FISH*, as an article of diet.

"The natives of the neighbouring countries, and the higher class of people in *Sinde*, have a singular notion regarding the fish diet of the inhabitants. They believe it prostrates the understanding; and, in palliation of ignorance in any one, often plead that 'he is but a fish-eater.' The lower order of the *Sindians* live entirely on fish and rice; and the prevailing belief must be of an old date, as they tell an anecdote of one of the Emperors of Delhi who addressed a stranger in his court with the question from whence he came: he replied, from *Tatta*; and the king turned away his head. The stranger, recollecting the prejudice against his country, immediately rejoined that he was not a 'fish-eater.' I am not prepared to state how far a fish diet may affect the intellect of the *Sindian*, but I certainly remarked the prolific nature of the food in the number of children on the banks of the *Indus*."

We are inclined to think that fresh-water fish, upon the whole, is not so salutary as fish of the ocean; and therefore there may be some foundation for the opinion, if not prejudice, of the natives of *Sinde*. Lieut. Burnes, however, has fallen into a very common error respecting the prolific nature of fish as an article of diet. It is true that there are more children to be seen in fishing than in inland towns. But this is owing to more early marriages in the former than in the latter. The causes, again, of the early marriages in the fishing-towns, are the greater facility of providing for families. The children can

there be turned to some account, almost from infancy, in the various avocations connected with the making of nets, drying of fish, &c. &c. &c.—circumstances not attendant on agricultural or even manufacturing localities.

ŒSOPHAGITIS.

Instances of this kind are comparatively rare. We introduce the following one from a recent lecture of Dr. Graves, reported in Renshaw's Journal for May 16th, 1835.

“The following case of *acute inflammation of the œsophagus* is particularly worthy of your attention, on account of the extreme rarity of the disease, and because its symptoms have, for that reason, been either erroneously or imperfectly described by authors.

My friend, Dr. Mackintosh, in his *Elements of Pathology* (vol 1, p. 228,) observes, ‘That of all the structures in the human body, the œsophagus is perhaps the least liable to disease. In general it is difficult to detect inflammation of the œsophagus till ulceration and constriction take place. I have seen only one case of universal inflammation of this tube not caused by poison,’ &c.

It is no wonder, therefore, that the description Dr. Mackintosh gives of the œsophagitis is very imperfect. The same may be said of that given by others. The best description of the disease is that given by J. P. Frank in his *Epitome*. If I recollect right, Abercrombie has recorded one well-marked case of œsophagitis. Strange enough, this disease is not spoken of at all in that excellent work, the *Cyclopædia of Practical Medicine*.

The inflammation in the following instance was evidently the result of cold, and occurring in a healthy habit, it ran through its course in a few days. The case is in the gentleman's own words, for when the disease was cured I requested him to give me a short account of it in writing.

‘February 24th, 1835.—For some days I felt as if I had caught cold, with something like sore throat. I felt as if

the root of the tongue at the left side was sore. By degrees this extended downwards; a ring about the lowest part of the throat became painful on swallowing. The pain was most sensible at the left side.

‘26th.—I took a bit of bread before dinner, and on attempting to swallow it, perceived great pain from the commencement of the throat, proceeding downwards towards the chest, as if the bread was then impeded by something, and from thence it seemed to proceed with increased pain to the back between the shoulders. I felt no want of appetite at dinner, but the attempt to swallow caused considerable pain. The night was passed in a state of great restlessness and with headach, violent pain sometimes seizing me on some little change of position, as it does in lumbago. The pain then seemed to affect the whole chest, and, extending to the back, caused a hot, burning sensation directly between the shoulders.

‘27th.—On attempting to swallow, I felt such pain as to force me to cry out as if the entire passage from the throat to the stomach was inflamed, and that every thing, whether fluid or liquid, had to force its way painfully through the passage. In swallowing it seemed doubtful whether the food could proceed.’

So far the details were furnished by the patient himself. In addition I may remark that, on the 28th, the inflammation had evidently begun to diminish, and that in the course of a few days more it had entirely disappeared. The treatment was restricted to abstinence and antimonial diaphoretics. There was no redness to be seen in that part of the throat which is visible when the mouth is opened.

ENTERITIS.

The following case is introduced in one of Dr. Graves' excellent lectures, published in our contemporary, the *London Medical and Surgical Journal*, (Renshaw's) for May 16th, 1835. It is characterised by the talented lecturer, as a

case of "VIOLENT ENTERIC INFLAMMATION," communicated to him by his friend, Dr. Nolan. We shall state the case before we make any remark.

"On Monday evening, 27th February last, he casually complained of pains in his bowels; they had not been freed on that day, and supposing it an instance of mere indigestion, I ordered him five grains of calomel, and a draught of castor oil. For that night I heard no more of him, but, early on the following morning, I was hastily summoned by one of his fellow-servants, who reported that he was dying. I found him labouring under severe but intermitting pain of the belly, particularly about the umbilicus, *violent and frequent cramps*, especially of the lower extremities, and occasional vomiting. The surface was perfectly cold; features sunken; eyes surrounded by a dark areola; voice subdued to a whisper; pulse 140, small and feeble; abdomen tender though not at all tumid. He told me he passed the night in great torture, and that the bowels were still unmoved. I immediately ordered ten grains of calomel, to be followed in two hours by an oil and turpentine draught, a turpentine enema, bathing, &c.

Three hours subsequently—temperature restored; cramps less violent; vomiting less frequent, but bowels obstinate; face and pulse equally unpromising as before; abdominal pain increased. Was this incipient inflammation? and what is the cure for inflammation? Bleeding? Well, I did bleed: but scarcely had four ounces been taken, when I was very glad to tie up the arm; the prostration alarmed me. Something at all events ought to be done, and I ordered a sinapism to the abdomen, a repetition of the enema (for I confess I have not much confidence in frequent or powerful purgatives,) a powder composed of calomel two grains, opium quarter of a grain, to be taken every fifteen minutes. Towards evening I thought my patient rallied a little; his countenance was better; pulse firmer; his abdominal pain not increased, and he vomited but once; the injection brought away with it a little mucus, but no more. Repetat

haustus terebinth. Repetat quoque enema. During the night there was just a trace of feculent matter, but vomiting returned, and I found him in the morning (the second of his illness) suffering an increase of pain; the abdomen, too, was now not only extremely tender, but *decidedly swollen*; the pulse remained quick and weak as ever. I could not discover that he passed water. Would you not call this inflammation? But would you bleed for it? I did unfortunately to as great an extent as I could, which was about eight ounces, and the cadaverous look, the cold-clammy surface, in short the absolute collapse which succeeded and *continued for hours*, gave me strong reason to regret it. *It produced no impression* upon the pain. I had read with great interest the invaluable observations of yourself and Dr. Stokes, as well as the publications of Armstrong, Griffin, Gooch, &c., wherein the applicability of opium to certain modifications of abdominal inflammation is forcibly demonstrated, and I thought my patient precisely in the condition in which you would probably have recourse to that powerful agent. I therefore commenced exhibiting half a grain of opium and two of calomel every half hour. After the second hour, I substituted for the calomel three grains of carbonate of ammonia, which, with the opium as before, I continued during the day and the whole night. In the morning (the third) I had the satisfaction of ascertaining that the pain and swelling had considerably subsided, and that the *bowels had been twice opened*; the countenance now spoke promisingly, and pulse began to fall. I however persevered in my plan of treatment for the day, and, indeed, for the two following nights and days (gradually increasing the interval between each dose however) until all trace of pain and obstruction had disappeared. The bowels continued to act from time to time, although I never ventured upon another purgative; the dejections were at first largely mixed with blood and mucus, but some assumed every character of health. Of the sequel (may be the consequence) of this interesting

case, you most kindly undertook the management, and I shall add nothing to this meagre statement of *facts*, which Mr. O'Donnell (of Keane's, in Suffolk-street,) to whose humanity and care I am deeply indebted, witnessed as well as myself. I shall leave you to speculate upon the propriety of bleeding at all under such circumstances. I shall also leave you to decide whether the increase of inflammation, which certainly occurred when I first gave up the opium plan (on the first night) for the sake of interposing a purgative, was to be attributed to the change or not. May not the case throw some light upon the use or abuse of purgatives? But I am doing more than I intended, and more than is useful.

I remain, my dear Doctor,
Yours most truly,
J. NOLAN."

With every respect for the acumen and practical tact of Dr. Graves, we cannot bring ourselves to believe that there was one atom—we had almost said *element* of enteritis in the above case. If forced to give it a name, we would call it *enteralgia*, rather than *enteritis*. Whether or not it would have emerged in inflammation of the bowels we cannot say—our impression is, that inflammation did not take place. Spasm may and does terminate—sometimes pass into inflammation; but, in the above case, we do not believe it had passed the boundary. Whatever the disease may be called, we have no hesitation in saying that Dr. Nolan's *treatment*, in our humble opinion, was the right one.

PHYSICAL SIGNS *versus* ORDINARY SYMPTOMS—ORGANIC DISEASE OF THE HEART AND THE KIDNEYS.

The following very interesting case came lately under the observation of Dr. Johnson, and may be worthy of record, on account of some peculiar circumstances attending it.

A gentleman (Mr. W—,) aged about 40, had been valetudinary for

some years; but had attended to his professional duties, those of an architect, till within a month or six weeks of his death. Five weeks before this event, he walked, in one day, a distance of some ten or twelve miles. The most prominent symptoms of the complaint, after this, were total loss of appetite—the rejection from the stomach of almost every thing that was swallowed, whether food or *medicine*, and distressing sleeplessness. He had been seen by Dr. Hodgkin, and was daily attended by Mr. Rix. When Dr. J. first saw him, on the 30th March, Mr. Rix could not attend, and Dr. J. on examination, found the following symptoms:—Tongue furred with the thickest crust that could be imagined—great gastric irritability—signs of hypertrophy and dilatation of the heart to a considerable degree—chest sonorous throughout, except in the region of the heart—skin cool—urine apparently natural—no sleep—great prostration of strength—bowels uncertain—secretions unhealthy. Dr. J. wrote to Mr. Rix, that there was organic disease of the heart, and recommended effervescing salines, with small doses of Battley, in order to quiet the stomach, and procure some sleep. On Wednesday, the 1st April, Dr. J. and Mr. Rix met. The gastric irritability was considerably allayed, and the patient had got some sleep during both the preceding nights. Mr. Rix now pointed out to Dr. Johnson the state of Mr. Ward's urine, which was highly coagulable, both by heat, and when tested with nitric acid. The patient complained of no pain in the back or in the region of the kidneys, but there was tenderness, on deep pressure, in the situation of the right kidney. Although the disease was clearly of a fatal nature, yet, considering that Mr. W. had been able, two or three weeks previously, to walk several miles in one day—considering, also, that the lungs were sound, and the breathing quite unembarrassed, it was evident, both to Dr. J. and Mr. Rix, that the organic disease of the heart was not the sole cause of the rapid prostration of strength—the inability to retain any thing on the *stomach*, and the vigilium

under which the patient laboured. An accurate examination of the epigastric region disclosed no symptom of inflammation in that situation, there being neither tenderness nor distention. The inference drawn by both practitioners then was, that, in addition to the organic disease of the heart, there was another disease—that of the kidneys, producing the irritability of the stomach by sympathy, and, in fact, being the main cause of the existing dangerous state of the patient. It was agreed that they should proceed on the soothing plan, with saline medicines, alteratives, and small doses of Battley or morphine. Upon this plan, though the patient made no advance towards recovery, yet he passed the time more comfortably, and many of the symptoms—those of a sympathetic nature—were mitigated. The anxiety of friends brought Mr. Wray, of Salisbury-square, into consultation on Monday, the 6th April. Mr. Wray, without pronouncing any decided opinion as to the pathology of the disease, strongly urged the propriety of bloodletting, in small quantity. About three or four ounces were abstracted, when faintness occurred. The blood was a good deal inflamed; but no alteration appeared in the state of the patient, excepting progressive debility. The mineral acids were given, but without much sensible effect.

On Friday, 10th April, an eminent physician and a well-known author, was added to the consultation. Dr. C— had examined the patient the preceding day, in company with Mr. Rix, and had made up his mind as to the nature of the disease. His decided opinion was, that the disease was of an inflammatory nature, and seated in the epigastric region—namely, in the stomach or its immediate neighbourhood. He contended that depletion was the best plan of treatment—that opiates should be discontinued—and considered the case as by no means hopeless. No auscultation was practised, and Dr. C. could see no proof of organic disease either in the heart or kidneys. Dr. J. then wrote down on a slip of paper the two conflicting and opposite opinions

of Dr. C. and himself, which he presented to Dr. C. and then deposited in the hands of Mr. Rix. As Dr. J. would not agree to farther bloodletting, it was deferred for that time, Dr. C. prognosticating that it would be necessary in a few days. In accordance with Dr. C.'s wish, the opiates were discontinued.

In an interview with the relations of the patient, it was rather imprudently stated by Dr. C. that Dr. Johnson entertained a much more gloomy opinion of the case than he (Dr. C.) did, as he (Dr. C.) considered it by no means hopeless. The result proved that this declaration made an unfavorable impression on the friends—for neither of the physicians were called in afterwards. The patient lingered a week longer, without taking any medicine, and then died.

Neither Dr. C. nor Dr. Johnson attended at the examination of the body, which was performed by Mr. Rix, in the presence of Dr. Hodgkin and Mr. Wray. The following memorandum was kindly furnished by Dr. Hodgkin, as copied verbatim from his note-book.

MEMORANDUM.

"Mr. G. Ward, aged about 40, of short stature and compact make, had led an active regular life, but was liable to exposure in the course of his profession, as master-builder. He had also suffered from mental distress, occasioned by the death of his wife. His health had been declining for some months; but serious apprehensions were not entertained until a few weeks before his death. He was seen once by Dr. Hodgkin, about three weeks or a month before his dissolution, when his peculiar sallow complexion, with slight fulness below the under eyelids, excited immediate suspicion that he was labouring under the renal disease, described by Dr. Bright, although no anasarca was observed in the legs or elsewhere. This gentleman complained of palpitation of the heart, unaccompanied by irregularity;—it was, therefore, considered to be enlarged, without valvular disease. Digestion was much impaired, and the odour of the breath was pe-

cular and highly offensive. It may be observed that this gentleman's urine, when examined, proved to be highly albuminous—which character it retained, but, as Dr. H. was informed, to a still greater extent, till the last. It was of a pale colour, and not deficient in quantity. The evacuation of this fluid seemed almost to act like hemorrhage, in reducing the patient's strength.

Autopsy.—The head was not examined. The lungs were remarkably healthy, with very slight effusion of lymph on one side. There was a very small quantity of fluid in the pericardium. The heart was considerably enlarged. This change had principally taken place in the left ventricle, the parietes of which were above an inch and a half in thickness. The valves appeared nearly or quite healthy.

The abdominal viscera, on their peritoneal surface, presented a dusky appearance. The mucous membrane of the stomach and intestines appeared to be of a healthy texture; but there was a small increase of vascularity in the course of the small intestines. It was partial, and appeared to be the result of congestion—probably cadaveric. The spleen was small, and rather soft. The pancreas was also small, its figure being rather irregular, but its texture unaltered. The kidneys were small, and appeared shrunk. The tunica adiposa was somewhat indurated, apparently by an old inflammatory state of its cellular membrane. It adhered strongly to the proper capsule of the kidney, which easily separated from the gland. The surface of the kidney thus exposed, was granular, affording a good specimen of far-advanced, mottled degeneration. Amongst the numerous white spots, several were of a partially opaque appearance. A section through the kidney shewed that their glandular structure had wasted, the distinction between the cortical and tubular parts being nearly obliterated. The pelves of the kidneys contained a little turbid and apparently puriform mucus. Dr. H. remarked that, for some hours after the inspection, he carried about with him the peculiar offensive, penetrating, and pertinaciously adhering odour,

which he had repeatedly noticed as attending the bodies of those who had died of this peculiar form of renal disease.

*Finsbury Circus,
29th April, 1835.*

The following note was received next day.

P.S. "I omitted to mention that the glands of Brunner, in the duodenum, were considerably developed. This being of a morbid character was at least equivocal, as it was not greater than often exist independently of disease. In order that I may not be considered to suppress an iota, I may add that there was some sanguineous discolouration of the mucous membrane of the stomach, but which I had no hesitation in regarding as rather cadaveric, or the result of events immediately preceding death."

J. H.

30th April.

The foregoing case is exceedingly interesting, as proving the insidious nature and fatal tendency of renal disease, where not a symptom was present, except the albuminous urine, that would have aroused suspicion in any mind, that such a malady was rapidly bringing life to a close. But then the albuminous urine was a physical sign which deserved the most attentive consideration, and which led Dr. Johnson, and, before Dr. J. saw the patient, which led Dr. Hodgkin to the very same conclusion. Dr. H. determined, from physical signs, in conjunction with general symptoms, that Mr. W. laboured under organic disease of the heart and kidneys. The disease of the heart, though of a formidable nature, and which would inevitably prove fatal in the end, was not advanced to that prominence, which would account for the rapid prostration of strength, and general break up of the constitution. The albuminous urine was, therefore, considered as of itself, in this case, sufficient evidence of renal disorganization. The extremely furred tongue was looked upon by the second consultant physician, as indicative of inflammatory disease in the stomach or

its neighbourhood, especially when coupled with nausea and sickness. Now, independent of the proofs afforded by dissection, it may be safely inferred that a thickly-furred tongue is far less indicative of gastro-enteritis than it is of irritation, or a disorganizing process going on in some distant part, and affecting the stomach secondarily. A red tongue is infinitely more demonstrative of gastritis, or gastro-enteritis, than a white. In respect to the inflamed state of the blood, it is well known that, in hypertrophy of the heart, and in many other diseases, the buff will present itself till the last drop of blood is drained from the body. Look, for example, at pregnancy, where buffed blood affords no proof of inflammation.

A point of great importance in medical polity has been only slightly glanced at—the imprudence, to give it no worse a term, of letting any discrepancy among the consultants slip out among the friends, whilst delivering the opinion. In the foregoing case, the mischief was evident and irremediable. The friends naturally concluded that, where the physicians differed in *prognosis*, they would be likely to differ about the nature of the disease and the mode of treatment. The consequence was, that both were discharged—and that *one* must suffer in reputation by the event of the case. Is this discreet—is it just, that not merely the chance, but the certainty of injury should be incurred, by the voluntary disclosure to friends of discrepancy of opinion among the medical attendants? It is true that, in the present case, the injury fell on the party who unnecessarily incurred it. But this might not have been the case. The party who disclosed no discrepancy of opinion might have been the sufferer, and that for no other fault than an error of judgment—to which we are all liable, and for which no man should be subject to punishment. We do not believe that the consultant who made the disclosure had any intention or expectation of injuring his fellow-consultant; but a moment's consideration must have convinced him, that one or other must lose credit with the family in the end—and if he was confident in

the truth of his own prognosis, he must have foreseen the danger that was impending over his colleague. There is one argument, however, which may be adduced in favour of the disclosure alluded to. The first consultant had given an unfavourable prognosis, and the second consultant not taking the same view of the nature of the disease, came to a different conclusion as to the final event, and might, therefore, deem it conscientious to disclose this discrepancy of opinion to the patient or friends. To this it may be answered, that *silence* as to the difference of professional opinion could do no injury to either party—whereas the disclosure must injure one of them. Are we, then, justified in injuring another for the sake of gaining some additional reputation ourselves? Suppose, for instance, that, in the present case, no allusion had been made to the discrepancy of opinion among the consultants. The recovery of the patient, contrary to the prognosis of the first consultant, could not possibly have injured the reputation of the second consultant—quite the reverse. The natural conclusion of the patient and friends would have been that, as Dr. Johnson was wrong in his prognosis, he was, most probably, wrong in his treatment of the case—ergo, the recovery of the patient was owing to the second consultant. Taking it in every point of view, then, we conceive that, unless upon some very extraordinary occasion, where great difference of opinion obtains as to treatment, there should be no disclosure of such opinions to the friends. If great discrepancy of opinion, upon some important point of treatment, occurred, we think it would be more prudent for one of the parties to retire, or to request a third opinion to decide the question.

In other respects, the case is extremely important. We have here an instance which proves the necessity of availing ourselves of physical and chemical signs, in addition to ordinary symptoms. It would probably be wrong to affirm that the physical signs are superior to the ordinary symptoms; but it would not be too much to say, that he who neglects to combine the two

classes, in the investigation of diseases, does an injury to his patient and to himself in the long run. The case in question shews the necessity of examining the urine by other tests than litmus paper. The urine, in this case, appeared to the eye to be very natural, and the application of the litmus and turmeric tests, did not prove anything satisfactory. But heat and nitric acid immediately shewed that a serious disorder, if not disease, was going on in the kidneys.

P.S. This case occupied the London Medical Society during two sittings, the discussions being very animated. It was attempted to be maintained that the trifling and partial blush of redness in the mucous membrane of the stomach and small intestine was the product of inflammation, and justified the diagnosis of the second consultant physician!! We will not insult the understanding of our readers, nor expose the fallacy of the advocates of this view of the case, by deigning to answer it. It is equally false and ridiculous. A more interesting question was raised as to the cause of albuminous urine, and the effects of its discharge by the kidneys. It was considered by some experienced practical surgeons in the Society, that, in such cases, the kidneys were in a state that incapacitated them for the secretion of urine, and that the serum of the blood thus escaped, with destructive debility to the constitution.

PATHOLOGICAL ANATOMY.

[Concluded from page 144.]

DISEASES OF THE LUNGS AND THYMUS GLAND.

Diseases affecting the tissue of the lung are incontestibly the most frequent to which newly-born children are subject. In many cases the disease appears to have existed for a few days only before birth, or even to have been the consequence of the commencement of the act of respiration. The partial development of the lungs, or pulmonary infil-

tration observed in the fœtus born before its time, and which breathes for several hours or even days, are evidently, in M. Cruveilhier's opinion, the result of the establishment of the function of respiration in lungs not yet adapted to it.

In the greater number of cases the disease has existed for several days or even months. The lungs then present different appearances. Sometimes they display the lobular pneumonia. Lobules, or groups of lobules, indurated or infiltrated, are dispersed in the midst of healthy tissue. Sometimes the lungs are extensively affected; M. Cruveilhier has seen both invaded throughout at once. The altered tissue sometimes resembles that of the pneumonia of the newly-born, at others it is completely carnified, granular, and the lobules represent glandular grains perfectly distinct. Lesion of the lungs is so frequent in the fœtus, that M. Cruveilhier has no hesitation in asserting that, *as many newly-born children die of disease of the lungs as adults.*

Such children die with asphyxia, but this differs from the asphyxia which is said by accoucheurs to be the cause of death, inasmuch as the latter is the mere result of the labour. The greater number of those who are said to die of such asphyxia do in reality die of apoplexy. The newly-born may live with a much less sound quantity of lung than the adult, and for reasons sufficiently obvious. Induration of the lungs may exist in the fœtus with embonpoint, and the appearance of perfect health. The bronchi are frequently filled with thick mucus, as in acute catarrh. The lungs of the fœtus may display much more extensive lesions than are sufficient to destroy the life of the adult.

M. Cruveilhier relates a considerable number of cases illustrative of the lesions alluded to.

A great number of children affected with syphilitic pustules have died of pneumonia or other lesion of the lungs, originating anterior to birth. Four cases are related. In the first there were cutaneous pustules, and the lungs were infiltrated here and there with blood and serum. In the second case the cu-

taneous pustules were connected with masses of induration in the lung, containing pus, and suppuration between the dura mater and frontal bone. In the third case the cutaneous pustules were accompanied with a greyish induration of the lungs throughout their whole extent; the spleen was much enlarged. In the fourth case the cutaneous pustules were accompanied with complete induration of both lungs.

M. Cruveilhier observes that, during the progress of gestation, the ovum may be considered a part of the mother, and is liable to disease as she is. It may be affected with pleurisy, pneumonia, peritonitis, chronic inflammation of the intestines, ascites, hydrothorax, syphilis, eruptions, even scirrhus. Of some of these affections he specifies cases for which we refer to the fasciculi themselves, or to 19th volume of this Journal.

DISEASES OF THE MOUTH AND PHARYNX.

Figures 1, 2, 3, of the third plate of the fifteenth fasciculus are devoted to the delineation of aphthæ, le Muguet. M. Cruveilhier observes, that this affection is sometimes confined to the buccal membrane, sometimes extends to the mouth and pharynx, and sometimes attacks the œsophagus into which it penetrates more or less deeply. It is most commonly abruptly stopped at the termination of the epidermis of the œsophagus at the cardia. Under the false membranes that constitute the affection, and which are sometimes confluent, the mucous membrane is invested with its epidermis, and presents no other alteration than a redness, slight when the patches are distinct, intense when they are confluent. The muguet rarely penetrates into the air-tubes. Sometimes the circumference of the superior orifice of the larynx is studded with it, whilst the mucous membrane within is free. But M. Cruveilhier delineates one instance of implication of the ventricles of the larynx. The linear character of the pseudo-membranes of the œsophagus depends on the longitudinal folds of the mucous membrane.

M. Cruveilhier remarks that the mu-

guet is nothing else than pseudo-membranous inflammation of the mucous membrane of the mouth. All ages are subject to it, though in the adult it is rarely idiopathic, but almost always symptomatic of some grave lesion of the intestinal canal, and appearing at a more or less advanced period of acute and chronic diseases, sometimes even during a false convalescence. It usually bodes a fatal termination, especially where it resists treatment. It may extend in the adult, as in the infant, to the pharynx and œsophagus, which our author has on several occasions found filled with a pulraceous whitish or brownish matter. In newly-born infants it is often epidemic, and it is endemic in certain hospitals where the wards are cold, humid, and ill-ventilated. This is the case with the hospital of Limoges, when the disease formerly committed great ravages. M. Cruveilhier doubts the advantage of the hospital system for the newly-born. The milk of a good nurse and pure air are much more advantageous than medicine.

FOLLICULAR ULCERATION OF THE STOMACH.

M. Cruveilhier remarks that this form of ulceration has been described by M. Belliard, who has published fifteen cases. In eight of these the children were from four to six days old; six were from eight to twelve; one was aged three weeks; proving, so far as a few facts can do so, that the nearer birth, the greater the prevalence of this affection. Several of the patients had severe lesions in other organs; one only, aged four days, had no other lesion than ulceration of the stomach.

Figures 4, 5, 6, of plate III. represent this lesion in the stomachs of children who died, one on the eighth day, another on the fifteenth, and the third one month after birth. In all, the ulcers were more or less numerous, and some had run into each other.

DISEASES OF THE SPINAL MARROW.

1. *Spina Bifida*. M. Cruveilhier presents the sum of the particulars of

seven cases of spina bifida. Five occurred in infants born at the Maternité during the time he was physician to that hospital. The history of all is nearly similar, all being otherwise well formed at birth, and enjoying free motion, even in the lower limbs, with the exception of one child in whom they were semi-paralysed.

Out of the five cases that occurred at the Maternité, the tumor was perforated at birth in two. M. Cruveilhier thinks that the perforation occurred at the moment of delivery, it appearing to be recent, and the liquid that escaped being perfectly limpid. In these two cases, the tumor was much larger than in the three in which no opening existed. As the thinness of the parietes of such tumors is directly as their size, the larger they are the more likely are they to be ruptured in delivery. M. Cruveilhier appears to entertain no doubt of the possibility of an ulcerated opening occurring before birth, for ulceration and commencing cicatrization are not unfrequently seen upon the surface of the tumor.

In the whole of the cases, the tumor occupied the space comprised between the first lumbar vertebra and coccyx, the most common seat of spina bifida, which, however, has been seen in the whole length of the vertebral column. The greater frequency of its occurrence in the lumbar region is satisfactorily explained by the successive development of the spinal arch and laminæ from above downwards.

The constant co-existence of spina bifida and hydro-rachis has made them bear the general relation of cause and effect, the accumulation of fluid occasioning the separation of the vertebral laminæ. The analogous instance of hydrocephalus bears out this reasoning. But M. Cruveilhier thinks that unless the spinal canal were peculiarly circumstanced, the mere accumulation of fluid, would produce distention only of the membranes, not hernia of them and of the spinal bones. After asking his readers and himself two questions,—first, whether those peculiar circumstances consist in a deficiency of continuity of the osseous canal, and of inter-

ruptions between the vertebræ? and, whether the spinal membranes distended by the fluid at first protruded into those inter-vertebral intervals, and subsequently, by the distention and pressure which the accumulating fluid exercises, separate the laminæ to the right and left? After asking these questions, we say, M. Cruveilhier declares that he is convinced, by the dissections he has made, of the impossibility of accounting for these tumors, in any other way than by admitting that, prior to the formation of the cartilaginous laminæ, the medulla and its envelopes have contracted an adhesion to the skin, an adhesion which keeps the medulla out of the vertebral canal, and consequently opposes the formation of the laminæ in this situation. This explanation he thinks sufficient, and indeed indispensable for the solution of the phenomena.

The connexion between hydrocephalus and spina bifida has been frequently remarked. In the majority of cases which have presented themselves to our author, he has found a certain quantity of serum in the cerebral ventricles. In one case, the ventricles were not unusually dilated, but the sub-arachnoid cellular tissue was filled with serum; and in two other cases, the brain was in a healthy state.

M. Cruveilhier's dissections enable him to confirm the accuracy of those observers, Tulpius, Burgius, Morgagni, &c., who have pointed out a particular disposition of the nerves and medulla, as common in cases of spina bifida. From a very careful examination of four cases, M. Cruveilhier ascertained that, in all, the spinal marrow with its membranes lost itself in the parietes of the tumor, and that from this part of the medulla, sometimes sound and sometimes atrophied or softened, sprang the nerves, which occasionally are even larger than natural. Another circumstance which has struck M. Cruveilhier, is the fact that, in spina bifida occupying the sacral region, it is not the cauda equina nor the sacral nerves which are confounded with the parietes of the tumor, but the spinal medulla itself. The explanation of this must be looked for in

the condition of the medulla in the fœtus, in which it occupies the entire length of the vertebro-sacral canal.

The adhesion of the spinal marrow to the tumor, and the alteration that its inferior extremity undergoes, account for the weakness of the lower limbs, and even paraplegia, under which some infants suffer.

The symptoms are briefly specified by our author. The tumor, in the cases that have fallen under his observation, was fluctuating and semi-transparent—when gently and gradually compressed, the infant uttered no expression of pain, but it cried if the pressure was rudely made. The tumor was evidently distended by the act of respiration, and by crying, and once M. Cruveilhier perceived it pulsate gently in correspondence with the pulse.

So long as the tumor remains unopened, the infant is generally well in health, but when opened, the child is generally, after the lapse of a few hours or days, attacked with fever and convulsions, succeeded by paraplegia and death.

On cadaveric inspection, pus, sometimes of a serous character, sometimes pseudo-membranous, is found in the sub-arachnoid cellular tissue, and this may be the case to the extent of even forcibly distending the dura mater. In other instances, when death has rapidly occurred, the spinal vessels are found much injected, and the sub-arachnoid cellular tissue is infiltrated with opaque serum, but not with pus. The inflammation commonly extends to the sub-arachnoid cellular tissue at the basis of the brain, and to the lining membrane of the ventricles.

M. Cruveilhier has constantly observed, at the level of the first cervical vertebra, a sort of elongated pouch, filled with serum or with pus, and formed out of the spinal arachnoid. This must exercise some pressure on the medulla oblongata. He has found the spinal marrow sound in all cases but one, where its inferior part was softened for the space of several lines, and contained in the centre of the softened part, a clot about the size of the head

of a pin. In several instances the pus has occupied both the cavity of the spinal and cranial arachnoid, and the sub-arachnoid cellular tissue.

M. Cruveilhier denounces puncture of the tumor with any instrument, as a means of cure. Sir A. Cooper employed in one instance frequent punctures, and the case did well. But this is looked on by M. Cruveilhier as an escape rather than a cure. The seton and the ligature, he thinks, and with justice, are fraught with danger. The only rational method of treatment is moderate compression.

M. Cruveilhier concludes by impressively stating that spina bifida is not of itself a mortal malady, but that it becomes so only in consequence of the opening of the tumor, and the entrance of air into the serous cavity, an entrance almost inevitably succeeded by arachnitis.

2. *Case of Monstrosity.* The child which was the subject of the plates and notice of M. Cruveilhier was born alive, but died in five minutes after birth. It offered a remarkable example of displacements occurring simultaneously in the three splanchnic cavities.

1. There was hernia in the occipital and anterior cervical regions, the hernia being formed by the meninges protruded by a liquid.

2. There was hernia of the lung into the cervical region.

3. There was displacement of the small intestines, of a portion of the large intestine, and of two portions of the liver. The small intestine, the large intestine, and a portion of the liver occupied the left cavity of the pleura; while another portion of the liver occupied the right cavity of the pleura.

4. There was mediastinal hernia, the stomach, and the duodenum occupying the posterior mediastinum.

5. And, finally, there was invagination of the œsophagus within itself.

The fact is more curious than M. Cruveilhier's speculations on it, and, as both are of little practical utility, we dismiss them without any farther notice.

DISEASES OF THE PLACENTA.

We may not unnaturally glance at these in connexion with the diseases that affect the fœtus. The knowledge of the alterations that this important part may undergo is not unworthy of the attention of practitioners.

The placenta, the physiological lungs of the fœtus, serves at once for the purification of the blood and the transmission of the nutritive material to the embryo. It consequently exercises a great and a double influence upon the latter. M. Cruveilhier states that the diseases of the fœtus exercise only a moderate influence on its nutrition, and that the operation of the diseases of the mother is inferior in this respect, to that of the diseases of the placenta.

The alterations of the placenta are not numerous, and have been imperfectly delineated and observed. M. Brachet de Lyon has published ten cases of placental disease, with the view of establishing the relation that exists between them, the state of the fœtus, and maternal symptoms. He refers the placental alterations to inflammation, and describes the following effects of that process:—1, Engorgement of the placenta, which he compares to hepatization of the lungs; 2, A "scirrhus state," the result of chronic inflammation;* 3, Suppuration of the placenta; 4, Tubercular degeneration, occasioned by suppuration of several portions of the placenta; 5, Organic adhesion of the placenta and the uterus. Such is the arrangement of M. Brachet, an arrangement evidently squared and planed by the hand of a systematist.

M. Cruveilhier, thinks that the diseases of the placenta may be fairly reduced to the following heads.

1. *Hypertrophy*. This sometimes consists in a serous infiltration, analogous

* It is singular that in France, the land of pathological anatomy, the pathological condition of scirrhus should be so ill understood in general. The mass of French writers call all chronic indurations scirrhus.—Eds.

to what is so frequently observed in the umbilical cord. This was connected with a deposition of false membrane in the following case;—A woman miscarried at eight months of a dead child. The enormous placenta weighed a pound and three-quarters. It was infiltrated with serum, which pursued the direction of the vessels, and gave the placenta a considerable volume. The cellular tissue external to the chorion was filled with coagulable lymph, and that between the chorion and amnios was infiltrated.

2. *Atrophy*. This may be general, or only partial, and confined to some of the cotyledons. The consequence may be wasting, or even death of the embryo. The characters of placental atrophy are a shrinking, and a sort of desiccation of the placenta which becomes dense, often granular, and even tubercular in appearance, and of a yellowish-white colour. This alteration has been described by authors under the name of *scirrhus*, *tubercular placenta*. M. Cruveilhier looks on it as the consequence of a separation of the placenta from the uterus, at the points at which the atrophy takes place.

3. *Inflammation of the Placenta*. Independently of less decisive evidence, inflammatory affections of the placenta are proved by two of the cases detailed by M. Brachet. In one, the placenta was very large, and three-quarters of purulent matter, mixed with blood. This was seated on the surface of the placenta, which it separated from its membranes, whilst granulations were noticed on the latter. In the second case, M. Brachet found, on cutting into the placenta, a number of points, presenting all the characters of the red hepatization, tending to pass into the grey. Besides these, there were numerous small collections of matter, varying in size, from that of a pea to that of a filbert. The pus was thick, and not offensive, the cavity containing it was not encysted, and the matter seemed simply deposited in the structure of the organ.

4. *Ossification of the Placenta.* There are varieties of ossification of this organ. In one, there is an osseous shell, of one, two, or three lines in thickness, covering uniformly, or in large patches, the uterine surface of the placenta, without penetrating into its substance. In the other, there are osseous spiculæ, which penetrate the organ, and traverse it in all directions. This kind of ossification proceeds always from the uterine to the fetal surface. In a case related by Dr. Garin, each cotyledon had its osseous plate, and all the plates were bound together by an elastic fibrous tissue. The woman was confined at her full time of a living child. In a case related by M. Carestia, two concretions existed on the fetal surface of the placenta, and a great number on its uterine aspect.

5. *Hydatid Cysts of the Placenta.* These are the most frequent of the morbid appearances in the placenta. They are serous, and not true hydatid cysts.

6. *Apoplexy of the Placenta.* We sometimes meet, in the torn substance of the placenta, collections of blood, varying in number and in age. Occasionally these are limited to a few, or to a single cotyledon; but often a greater number are affected, and then abortion is inevitable. M. Cruveilhier has met, in the same placenta, all the changes which apoplectic cysts undergo.

Here our present notice of M. Cruveilhier's labours terminates. We shall take care to bring the whole before our readers. For none can now neglect pathology, and a knowledge of its facts is indispensable, even to the humblest practitioner. Its advantages are not immediate, but it forms the foundation of all genuine medical and surgical science, and without it that science is false and fleeting.

common to make a knowledge of the best and most successful treatment an object of no inconsiderable importance. One would also be inclined to think that it is so common as to furnish to all the means of observation, and to enable a consistent and correct opinion of its nature and management to be formed. Unfortunately, however, this is not the case, and the reasonable expectation is not realized in practice. For opinions the most opposite and contradictory are entertained upon both points, and, as all parties boldly appeal to facts, the prospect of agreement, and the probability of settling the question by a satisfactory decision, would seem to be equally remote.

The identity of syphilis and gonorrhœa has, as our readers are well aware, been often affirmed, and as often denied. The proofs are hypothetical, the facts opposed to them are positive. The leading circumstance against the identity or similarity of the two poisons is the general tendency to the super-vention of secondary symptoms in one, and the still more general indisposition to the occurrence of such symptoms in the other. This is a circumstance which must weigh more powerfully with a plain and a practical man, than all the specious arguments and pretty theories of ingenious reasoners, or than even the most imposing statements of actual experiments. It has been said, indeed, that secondary symptoms do follow gonorrhœa. Setting aside what is termed gonorrhœal rheumatism, and gonorrhœal ophthalmia, we must say we have never witnessed an unequivocal example of secondary symptoms after this complaint. Yet we have seen much both of syphilis and gonorrhœa; and we leave it to the theorists to explain why, the poison being similar in kind, phenomena so opposite should be displayed.

It is now a considerable time since we reviewed a work on the venereal disease, from the pen of Mr. Wallace of Dublin. Some portions of that work remain unnoticed, and amongst those portions is the section devoted to the consideration of gonorrhœa. We are anxious to bring the subject of venereal

ON THE MANAGEMENT OF GONORRHŒA.

This troublesome disease is sufficiently

maladies frequently before our readers, because there is more ignorance with respect to their true character and proper treatment than could be wished. We shall, therefore, select the present chapter of the work of Mr. Wallace for notice and for criticism.

Mr. Wallace displays throughout this work a peculiar tendency to theorize. With that lubricity which is said to characterize the eel of science, he slips from position to position, and from fact to fact, with a dexterity more calculated to give birth to admiration than conviction. Admit but his postulate and you are overwhelmed by the sequiturs.

Gonorrhœa is with him a kind of syphilis, and, oddly enough, he places it as an intermediate link between phagedæna and indurated syphilis, or what is vulgarly considered the beau-ideal of a chancre. Our readers may stare, as all plain men would, at such a localization, yet such it receives from Mr. Wallace, and a long and curious process of reasoning is employed to establish its propriety. We may disregard all this, and, picking the insulated gem from the cabinet, proceed to inspect and to admire it.

Gonorrhœa, according to Mr. Wallace, is analogous to erysipelas, as regular syphilis is similar to phlegmon. As an illustration of the useless ingenuity that likens things unlike, we may quote the passage that contains the parallel.

"It has always seemed to me, that catarrhal primary syphilis holds, in some measure, the same relation to that form of inflammation called erysipelas, or erratic inflammation, or diffused inflammation, as the regular disease bears to the phlegmonoid or circumscribed form of inflammatory action. For the regular form of syphilis is characterized by its morbid action being circumscribed like that of phlegmon; while the catarrhal form is equally characterized by a disposition to be diffused, to creep from one part to another, &c., like erysipelas. In fact, the morbid action in catarrhal primary syphilis may so extend as to involve, at the same time, the whole of the urethra, the bladder, the testicles,

the glans and prepuce, in the male; and in the female the nymphæ, labiæ, clitoris, vagina, &c. &c. : while its tendency to creep from one part to another—decreasing or disappearing in a great measure in the parts first affected, but extending in the same proportion to the sound parts—is oftentimes so great, that in the male, in whom it is generally confined at its origin to the preputial end of the penis, it not unfrequently creeps slowly on to the posterior parts of the urethra, to the bladder, or to the testicles, while it decreases or ceases entirely in the parts first affected. Hence we sometimes find, that these more deeply-seated organs are severely affected after the disease has ceased, or nearly ceased, in its original seat. Thus also the discharge may be often forced, by pressure made along the penis, to come from parts of the urethra more or less removed from its orifice, according to the stage of the disease.

The disposition to creep along a continuous surface, from one part to another, is not to be confounded with a disposition equally possessed by catarrhal primary syphilis in common with the erysipelatous form of inflammation, to excite disease in remote parts, without influencing perceptibly the intermediate parts. Of this mode of influence, we remark the following varieties:—

1st. The original disease may diminish or cease, immediately before the remote organ becomes affected; or else the remote organ may become affected, and then the original disease quickly decrease or disappear.

2d. The original disease, in place of disappearing or decreasing upon the occurrence of the secondary disease, may, by the reaction of the latter, be increased.

3d. The original disease may remain uninfluenced by the secondary disease.

When catarrhal primary syphilis produces sympathetic disease in remote parts, without influencing perceptibly the intermediate parts, I am not disposed, from the facts which I have observed connected with such occurrences, to consider the sympathetic disease syphilitic; for it seems to me, for several

reasons that the specific action of syphilis cannot be produced in any part, unless by the direct contact of venereal matter. I therefore consider such sympathetic affections to be forms of erysipelatus, or diffused, or erratic inflammation, excited by a syphilitic disease, although they are not themselves syphilitic."

The utilitarian in science may remark, that the comparison of gonorrhœa with erysipelas, and of syphilis with phlegmon, is absurd, if meant as a comparison of diseases, and useless if intended as a comparison of actions. It savours, in fact, of the old and idle mania for erecting processes, and actions, and stimuli into substantive things, for substituting the chimeras of a prurient imagination for the sober observation of facts. We defy the student, be he young or old, to rise from such comparisons as this of Mr. Wallace, with one more definite idea of the nature and the laws of gonorrhœa. On the contrary, he is confused by the mixture of fact and supposition, of actual circumstance and far-fetched analogy.

We do not know why Mr. Wallace denies the power of syphilis to contaminate parts remote from that which was primarily affected, unless it influence, in a perceptible degree, the parts which are intermediate. When a man contracts a sore upon the penis, and, after a period of five or six weeks, exhibits an ulcer in the throat, we generally believe that the latter is a secondary syphilitic symptom, although no intermediate part is implicated. How Mr. Wallace may explain this difficulty, we cannot, of course, pretend to determine; but no doubt his ingenuity *can* explain it.

Mr. Wallace's views of the nature of gonorrhœa are, as Bentley said in amending a celebrated passage in Milton*—

"Not light, but rather a transparent gloom."

"The very uncertain effects of remedies employed in the treatment of ca-

tarrhal primary syphilis, and the numerous and remarkable phenomena which it often presents during its progress, seem to prove that it is a disease of a very complex character. But do we consider with sufficient accuracy the nature of the morbid actions which constitute this disease? And is not our treatment of it more empirical than it need be, in the present state of our knowledge?

That catarrhal primary syphilis is not, as some appear to believe, a purely inflammatory disease, must be admitted, when we consider the effects which it sometimes produces in the system, and that it cannot be subdued with certainty or rapidity by those measures which quickly cause the termination of common inflammation; yet its phenomena leave no room to doubt, that it is, at least in general, accompanied by a state of inflammatory action.

It might, from reflecting on the cause and occasional effects of catarrhal primary syphilis, be supposed probable, that the specific or peculiar mode of action, which is evidently superadded in this disease to the state of inflammation, is similar to that which attends the ulcerating forms of primary syphilis; but when we examine this question more closely, we must conclude that they are different; for, otherwise, we cannot account for the peculiar local characters of catarrhal syphilis, nor why mercury, which so often acts as a powerful resolvent, as it were, on the ulcerating forms of syphilis, should exercise an influence comparatively trifling on the catarrhal form. At the same time it must be admitted, that the morbid state which attends the latter partakes somewhat—perhaps sometimes more and sometimes less—of the mode of action of the former; for we know that they are capable of reciprocally producing each other, and of causing analogous secondary effects in the constitution.

Thus it is evident, that, as the phenomena of catarrhal primary syphilis are neither purely inflammatory nor purely syphilitic, there must exist a peculiar mode of action resulting either

* "Not light, but rather darkness visible."

from a combination of inflammatory and syphilitic action, or from the addition of an entirely new mode of action; and it is most probable that the latter is the case, as otherwise we shall not be well able to explain the peculiarities of this disease;—for although inflammation often complicates the ulcerating forms of syphilis, these forms never present, when this combination occurs, the characters of catarrhal syphilis.

In relation to this question we are, however, to remember, that the inflammation of catarrhal primary syphilis is more purely erysipelatous; and that a morbid state might result from the combination of this form of inflammation with the syphilitic action, which would not result from its combination with a more phlegmonoid or ulcerating form.

Now do not the preceding reflections authorize us to conclude, that the morbid state which constitutes catarrhal primary syphilis, is a complex one, formed of inflammation, of an erysipelatous character,—of a specific mode of action, which establishes a degree of relationship between it and the ulcerating forms of the venereal disease,—and, lastly, of a mode of action which is its particular attribute, or by which it differs from all other diseases? And is it not in accordance with the present state of our practical knowledge to admit, that the inflammation may subside, or be removed, while the syphilitic action remains combined with the specific action of the disease; or that one of the latter modes of action may persist, after the other has subsided or been removed?"

Well may Mr. Wallace designate this view as "somewhat hypothetical." It is a very pretty specimen of that form of reasoning known in the Green Isle under the name of *botheration*. Gonorrhœa is a combination of an inflammation, which is not an inflammation, but more an erysipelas—of a syphilis which is not a syphilis, but something else, a relation to it—and, lastly, of a mode of action which is its particular attribute, or by which it differs from every thing else. We make Mr. Wallace a present of his theory, and we make our readers a present of the mean-

ing of it, if any meaning, stripped of verbiage, there be. And all this windy dissertation is substituted for a simple and straight-forward description of the phenomena of gonorrhœa—all this speculation, fanciful, and subtle, and idle speculation, for a simple consideration of its facts. Why, what treason have we here against the very essence of inductive reasoning, against the very spirit of the philosophy which Bacon taught, and which has made every science what it is. We think we see again the old array of dogmatists and empirics in medicine before us, we think we have the work of a writer of the last century, a writer of the wordy school of Hunter.*

When we turn from such fancies, engendered in the closet, to the simple observation of nature, we find the following circumstances. First, that gonorrhœa—that is, a discharge from the urethra, varying in colour and consistence, attended with more or less of inflammatory action in the mucous membrane of the urethra, and following sexual intercourse—is extremely frequent—secondly, that, in some cases, there is much of common inflammatory action, not only in the mucous membrane, but in contiguous tissues, whilst, in other instances, the inflammation is comparatively slight—thirdly, that parts connected, by continuity of texture, with the mucous membrane of the urethra, occasionally become affected with inflammation, the primary complaint ceasing, diminishing, or remaining in statu quo—fourthly, that the mucous membrane of the conjunctiva and the synovial membranes of the joints, are occasionally attacked with inflammation, as a consequence of the primary complaint—and, fifthly, that secondary symptoms are so rare, as to render their nature dubious and their cause uncertain. Such are the conclu-

* We suppose there are few, now-a-days, who will defend the mode of reasoning adopted by John Hunter. His great merits are to be found in his museum—in his almost superhuman labours.

sions, simple, and, we believe unbiased, that our means of observation will enable us to form. Perhaps it would be well to institute an elaborate series of experiments on the communicability of gonorrhœa, and on the possibility of producing sores of a syphilitic character, and followed by such symptoms as succeed to syphilis, by inoculation of ulcerated surfaces with gonorrhœal matter. But difficulties stand in the way of such experiments, which can only be conducted with satisfaction and success in a public hospital.

We may proceed to discuss the treatment of this form of venereal complaint, a form more troublesome, in many instances, than those more formidable in their existing characters and secondary consequences. There can be no question that gonorrhœa has been treated too empirically—that surgeons have been led away from the observation of varieties of symptoms, and the application of remedies to those varieties, in order to discover one specific for all—that the presence or absence of common inflammation has been too much disregarded—and, as a natural result of such neglect, that stimulating medicines have been grievously abused. One man has lauded cubebs, another copaiba, a third the turpentine, a fourth injections, as a cure for gonorrhœa; and cubebs, copaiba, turpentine, injections have been as blindly given as indiscriminately recommended. The result has been, an extreme and unnecessary aggravation of inflammatory symptoms and inflammatory complications. Inflammation of the prostate, of the bladder, of the testis, induration of the corpus spongiosum, enlargement of the lacunæ, and stricture, have been as frequently the fault of the surgeon as the natural consequence of the disease.

In some former Numbers of this Journal, we pointed out the principal inflammatory symptoms attending gonorrhœa, and endeavoured to lay down some rules of treatment which might tend to diminish the obstinacy of the complaint, and to obviate the unpleasant accidents that not unfrequently attend it. It was chiefly with the view of following up the spirit and the mat-

ter of those remarks that we began this article.

To the treatment of gonorrhœa we shall, therefore, proceed, making Mr. Wallace's text the peg on which to hang any observations of our own. He directs attention, and properly directs it, to the existence or the absence of inflammatory symptoms—and to the habits and constitution of the patient. The surgeon should make himself accurately acquainted with the duration of the symptoms, the treatment that has been adopted, and the history of former attacks of gonorrhœa, if any such have been experienced.

It is generally thought that a first gonorrhœa is the worst, and so it frequently is. But occasionally this is not the case. In January, 1833, we were consulted by a patient, who was then labouring under gonorrhœa, with severe inflammatory symptoms. It was perfectly cured in one month. This was the fifth attack of the complaint. The first had occurred seven years previously, and lasted from three to four months—the second, twelve months after the first, and had lasted from six to seven months—the third twelve months after the second, from four to five months—the fourth twelve months after the third, from nine to ten months. We might mention many instances of this description, but every practical surgeon must have met with such.

On the symptoms indicative of inflammatory action, we think we need not dwell—they are obvious and familiar. But we may make a remark or two on the discharge. During the inflammatory stage, it is usually yellow and thick. Mr. Wallace remarks, in reference to this point—

"It would seem as if there existed a close relation between the characters of the discharge and the state and degree of the attending inflammation. During the first stage, or before inflammation has commenced, and during the third stage, or when it has become decidedly passive or has ceased, the discharge is, in general, more scanty, more thin, and more colourless, than during the intermediate stage, or when the state of inflammation is at its

highest degree. I have also observed, that the less the inflammatory action, the less alkaline the discharge, as may be easily ascertained by litmus paper. When the inflammation is at its height, the discharge has very often a greenish tinge,—sometimes it is tinged with blood, and at others it is of a primrose yellow colour. These varieties in the shade of colour point out corresponding varieties in the degree and character of the inflammation. The thick primrose-coloured discharge generally occurs in more healthy habits, and the greenish and reddish discharges in weaker and more irritable persons. When the inflammation is very high, we may sometimes remark shreds of lymph discharged from the urethra with the urine."

We are disposed to agree with Mr. Wallace in the position, that a thick and yellow discharge is usually the sign of a sthenic habit and of sthenic action. But we do not coincide so entirely in the remark, that the reddish discharges are evidences of weakness. We have seen thick dark discharge, the colour being evidently due to the presence of small quantities of blood, in persons of a plethoric habit and of strong constitutions. We should say that we have found such discharges generally peculiarly obstinate. We have under our care at this moment a gentleman in whom this dark discharge has existed, and in whom the disease has proved peculiarly intractable. Capivi, cubebs, turpentine have arrested it, but each has done so for a few days only.

In some persons of an irritable habit, very great pain in micturition attends a thin and profuse discharge. Here there is inflammation, but probably not of a very acute, at all events not of a very healthy kind.

Are pain and chordee decisive evidence of inflammation? Let us hear what Mr. Wallace has to say.

"It might be presumed, that the state of sensibility of the affected parts would afford a satisfactory criterion of the state of inflammation. This, however, we do not find to be the case; for although the sensibility of the diseased surface decreases in general very much,

as soon as the atonic stage of catarrhal syphilis commences, there often exists with asthenic action very considerable pain or irritability. We cannot, therefore presume that the active stage of inflammation still continues, merely because there may exist much *ardor urinae*. But if there be a constant uneasiness, rather than an excess of sensibility to the passing of the urine, and more particularly if this constant uneasiness exists along with a recent disease, we shall, in general, be justified in concluding that a state of active inflammation is then present.

Are we to consider the accompanying inflammation sthenic, as long as chordee persists? Certainly not; for although chordee is very frequently connected with active inflammation, it is also often connected with an irritable and atonic state of the urethra."

We observe that Mr. Wallace takes no notice of a distinction which is practically important, a distinction between painful erections and chordee. Patients constantly say they have chordee, when we find on inquiry that they have pain in erection at the end of the penis, or in the course of the urethra, unattended with any actual curvature of the former. Now it must be evident from the least consideration of the structure of the urethra that true chordee, that is curvature of the penis in erection, cannot possibly occur without a physical alteration of the corpus spongiosum or corpus cavernosum of the penis. And such an alteration is and must be the effect of inflammation. But mere painful erections, though generally also the result of inflammation, are sometimes attended with comparatively little, so little that it may be almost disregarded. We are careful then to inquire particularly of patients the character of what they term chordee, and four times out of five, we ascertain that they have not really chordee at all.

On taking a review of the symptoms we have noticed, we may state in a broad and general way, that if a patient of a tolerably good habit of body, has purulent or even thin profuse discharge, and considerable pain in micturition, that patient has the inflammatory symp-

toms of gonorrhœa, and requires more or less antiphlogistic treatment. If the orifice of the urethra is red and pouting, if painful erections are experienced, and if any general pyrexia is present, the inflammatory character is still more marked.

The inflammatory complications of gonorrhœa, consist of affections of other tissues besides the mere mucous membrane of the urethra. They are inflammation, and induration or suppuration of the lacunæ—inflammation of the corpus spongiosum, or the corpora cavernosa—inflammation of the cellular tissue of the penis, producing phymosis, paraphymosis, or abscess—inflammation of the absorbents of the penis—inflammation of the prostate, the bladder, and the testis. Such are the occasional, and the unequivocal inflammatory complications of gonorrhœa. That they are inflammatory, is too obvious to require argument or proof. Yet strange to say, some at least, of these affections, have been disregarded, and their purely inflammatory character has been overlooked. On some of these complications or results of gonorrhœa, we have fully dwelt in former numbers of this Journal. What remarks we have to offer will therefore be brief, and will be better introduced farther on. Let us follow Mr. Wallace as he passes to the treatment.

During the inflammatory stage, that is, while there are genuine inflammatory symptoms, antiphlogistic measures are required. General bleeding is seldom necessary, but leeches to the penis or the perinæum often are so. On the other items of the antiphlogistic code we may be silent. Mr. Wallace mentions, among other remedies, mild laxatives, and opium and henbane with calomel. We must say we always give calomel with antimony and opium at first, and conjoin with these medicines not merely mild laxatives, but powerful cathartics. We are certain, quite certain that the latter are productive of very great service. What shall we say to the following heresy?

"Is mercury" says Mr. Wallace, "to be employed in catarrhal primary syphilis? It is my general practice to

administer mercury in small doses in this disease, when it is not accompanied by a state of active inflammation, or when the active inflammation has been subdued; and this practice I have adopted upon the following grounds.

1st. The power possessed by the catarrhal form of primary syphilis to produce the ulcerating forms of this disease, points out a similarity in their morbid action, and affords some reason to presume that they may be combated by analogous measures.

2d. As the catarrhal form of primary syphilis may produce constitutional symptoms similar to those which follow the ulcerating forms of this disease, and as mercury is admitted to have a controlling influence in preventing those of the latter, it may be presumed that it will have a similar influence over those of the former.

3d. As mercury has a remarkable power over the catarrhal form of secondary syphilis, or that form of syphilitic catarrh which results from contamination of the system, we may, from analogy, conclude that it is likely to have some power over the catarrhal form of primary syphilis.

4th. If cases of catarrhal primary syphilis occur, upon which mercury does not seem to exercise any control, there occur other cases in which we find it to act in the most salutary manner; and others again, in which the discharge will continue, and be after a time followed by induration and bubo, and most probably by secondary symptoms, unless this medicine be given.

5th. If mercury does not serve any useful purpose in the treatment of catarrhal syphilis, it can do no harm if properly administered, nor will it interfere with the administration of any other remedies.

Small doses of mercury are sufficient in ordinary cases of catarrhal syphilis. I seldom employ more than about five grains of the blue pill with a quarter of a grain of opium twice a day, or morning and night; and seldom continue it longer than two or three weeks. This has appeared to me sufficient to afford all the assistance required in general for

the removal of this disease, or to protect the constitution from contamination."

The majority of our readers, and the practical portion too, will feel some surprize at a writer recommending at this time of day, a *course* of mercury for gonorrhœa. The common sense of surgeons would seem to have settled this matter for ever, would appear to have decided that such treatment is at once unnecessary and injurious. For observe that this is not a new system plausibly and freshly advocated, but an old and abandoned one resuscitated. It is but a few years since Sir Astley Cooper denounced as infamous the antiquated custom then maintained in the Borough hospitals, of putting gonorrhœal patients through a course of mercury.

Mr. Wallace is in general peculiarly unfortunate in his methods of reasoning. His principal argument is the *petitio principii*. Such is certainly the case in the present instance; such is the character of the assertion, for it is no more, that gonorrhœa possesses the power of producing the ulcerating forms of the disease. He does not even attempt to prove this; and until he does so, his readers must deny it. The second assertion is equally gratuitous:—that gonorrhœa may occasion secondary symptoms similar to those of syphilis. Of this he offers not a shadow of a proof, and the common experience of mankind is opposed to it. How often do we witness gonorrhœa: how seldom do we see any secondary symptoms from it. For our own parts, we repeat, what we have already stated, that we never yet saw one unequivocal instance of the sort. What "the catarrhal form of secondary syphilis, or that form of syphilitic catarrh which results from contamination of the system," may be, we profess ourselves perfectly unconscious. We therefore make Mr. Wallace a present of all the value, if any there is, of his third argument or statement, whichever it may prove. The fourth is a combination of two main assertions: first that mercury is in some cases "most salutary," and that, in others, induration and bubo, and probably secondary symp-

toms will occur, unless it be exhibited. If the first of these assertions is a mere matter of experience, and we think that the generality of surgeons are adverse to the position of Mr. Wallace, the second is a repetition of an assumption to which we have already referred. But what does Mr. Wallace mean, when he says that induration may follow gonorrhœa? Is it induration of the corpus spongiosum? If so, we can assure him that that it is the result, the natural result, of inflammation extending to that structure, and certain we are it is no evidence whatever of specific action.

Taking the whole affair in the lump, we may safely say, in reply to Mr. Wallace, that he stands, and is likely still to stand, alone in his general recommendation of a course of mercury for gonorrhœa. We have seen it tried frequently, but we never yet saw the least satisfactory evidence of its utility. Here then we are *toto cœlo* arrayed against Mr. Wallace's opinions and advice. But to proceed with the treatment of this complaint. At the same time that Mr. W. is exhibiting mercury, he exhibits also cubebs and copaiba.

"At the same time that mercury is used in catarrhal syphilis, we are to administer such remedies as have a specific influence over the peculiar morbid action which especially distinguishes this disease—I mean copaiba and cubebs; and it is to be observed, that, as a combination of different purgatives will frequently act more beneficially and more effectually than any single purgative, the medicines just mentioned will also often act much more effectually if used in combination, than if given separately. Their power will also be increased by uniting them with such remedies as have an especial action on the urino-genital organs—as the aqua kali, nit. potassæ, spt. æther. nit.

Of the specific influence of copaiba and cubebs over the catarrhal form of primary syphilis, I can have no doubt. It will be, however, for the most part necessary to administer these medicines in larger doses than are commonly employed; and I consider it better to

interrupt their employment every three or four days, for a day or two, than to give them uninterruptedly.

A state of severe passive inflammation forms no objection to the use of either cubebs or copaiva. Indeed, having premised evacuations, I have often employed them with great advantage, even when the inflammation seemed to be active. The medium dose of cubebs which I give, is six drachms in the day, and the medium dose of copaiva two drachms. These quantities are to be divided into three doses, and one dose given three times a day, about an hour after meals.

If either of these medicines has been given separately, and appears to disagree or to have lost its effect, much advantage will be derived from using the other—leaving off whichever may have been previously employed. Indeed I have, on some occasions, thought that it was more advantageous to alternate the use of the cubebs and copaiva with each other, than to give them combined."

Mr. Wallace proceeds to a little disquisition, of the nature that he loves, on stimulants and tonics and astringents; and he proves, as clearly as the nature of the thing will allow it to be proved, that a stimulant is not a stimulant, and that an astringent is something else. What a happy talent that must be, which can satisfy ourselves of the truth and soundness of our most recondite speculations: and can demonstrate with the precision of Philosopher Square, and admit with the faith of Parson Allright, not only the absolute fitness of things, but the divine rule of grace. That talent is possessed in an eminent degree by Mr. Wallace. His practice may not fit his theory, but his theory never fails to suit his practice. We will not be so ill-natured as to say, as Gulliver said of the tailors of Laputa, that although they cut their coats upon abstract principles, those coats were the worst made that he ever saw; but we must admit that Mr. Wallace's treatment is an olla-podrida of every notion and every mode of management, a Koran picked from Jew and Christian, in which every sect discovers at the same time

that its tenets are adopted, and itself is damned.

We should like to quote the theoretical views of Mr. Wallace on the operation of stimulating applications; but our limited space must prevent us from indulging the natural desire, and we must content ourselves with stating that Mr. Wallace prefers employing the precise and definite designations of alterative and tonic, to the loose and improper term of stimulant. Thus fifteen grains of nitrate of silver dissolved in an ounce of distilled water, is his "tonic and alterative application," and one "of a medium strength"!

"The tonic or alterative application which I prefer in catarrhal primary syphilis, as long as there exists a high degree of morbid sensibility, is a solution of the nitrate of silver in distilled water. When this state of morbid sensibility is diminished, I use a solution of the muriate of mercury; and when all morbid sensibility has ceased, and a discharge still continues, a solution of the acetate of zinc, or of the sulphate of copper, &c., is employed. The strength of these injections must vary under different circumstances. Fifteen grains of the nitrate of silver to an ounce of water, half a grain of the muriate of mercury, or a grain and a half of the acetate of zinc, or of the sulphate of copper, to the same quantity of water, will form solutions of a medium strength."

"Should a state of morbid sensibility with discharge continue in the male urethra after the judicious and successive employment of the remedies above mentioned, great advantage will be very often derived from the introduction of the bougie or catheter, and from the application of the nitrate of silver in such a manner as to vesiccate or excoriate the surface of the penis along the urethra from the scrotum forwards, when the disease seems to be confined to the front part of the penis; or from its application to the perinæum, when there is reason to believe that the disease has extended further toward the bladder."

We believe we have put our readers in possession of Mr. Wallace's views

of gonorrhœa, and the principles of treatment which he recommends.—Those principles are somewhat subtle—that treatment rather complex. To the subtlety of the former we need make no farther allusion now, but we think we may venture to point out once more the composite quality of the latter. At one and the same instant the patient is to be subjected to a course of mercury, to take cubebs *and* copaiba, *and* to use an injection of nitrate of silver of the moderate strength of fifteen grains to the ounce of water. This heterogeneous mess of remedies of all descriptions, and seemingly of precisely opposite effects, would seem to defy a consistent theory. Yet a theory is offered by our author, and success is as boldly declared to attend them.

For our own parts, like Boswell, we admire, even if we cannot acquiesce. When Bozzy was staggered by any very violent dogma of his master, he gently admitted his own incapacity. "Ah! Doctor," he said, "the evidence that your mighty mind rejects is amply adequate for mine. What won't fill a quart pot, will fill a pint." In this instance we are forced to confess ourselves the pint pot, and the ordinary opinions on the nature and the management of gonorrhœa, fill us too completely to admit even the drippings from Mr. Wallace's quart.

As practical men, we are reduced to something like this moderate creed:—that we know of no means of distinguishing discharges from the urethra after connexion, from what is denominated gonorrhœa—that we have never seen unequivocal secondary symptoms after gonorrhœa, and although we do not deny their occurrence, we contend that that occurrence must be rare—that this is of itself a broad and a satisfactory distinction between gonorrhœa and syphilis—that, therefore, while we advocate a moderate and rational mercurial treatment for the latter, we cannot advocate and do not practise the exhibition of mercury for the former.

Perhaps we may be permitted to conclude this article, already rather long, with a rapid exposé of our own views of treatment. And as we have paid some attention to the subject, we trust

we shall not be deemed impertinent in offering the opinions we have formed.

It is indispensable on the part of the surgeon to remember, that gonorrhœa is a compound of a specific complaint and of ordinary inflammatory action. In some cases inflammation is found to be considerable—in others it is not. Common sense whispers, and experience amply confirms its dictates, that the same treatment can scarcely be proper under such opposite circumstances. The complications of gonorrhœa are usually inflammatory, and consist of inflammation of tissues in immediate or remote connexion with the mucous membrane primarily implicated.

The great rule on which we would insist is first to remove the inflammatory action; secondly, to arrest the specific discharge. So long as there is violent pain in micturition, and decided purulent secretion, so long, we conceive there is active inflammation.—This we should therefore attempt to subdue, as we would inflammation of any other mucous membrane, by smart doses of calomel with antimony and opium—active purges—starvation—rest—and diluents. If inflammatory action runs very high, local or even general depletion is required. Such is our treatment of the inflammatory stage of gonorrhœa. As soon as that stage is decreasing or has ceased, we immediately begin to exhibit copaiba or cubebs, combined with injections of alum or lead. These means are usually extremely successful, and what is more, they are extremely safe. Within these last twelve months we have treated a large number of cases of gonorrhœa in this way, and in not one case has hernia humoralis or any inflammatory complication supervened. We are satisfied of the safety of this plan of treatment.

We admit that pain in the act of micturition should not always preclude the exhibition of copaiba, or cubebs, and injections. When that pain persists, although the other inflammatory symptoms have subsided, it will often be removed by stimulating remedies. When the discharge is thin, when swelling of the penis has ceased, and when the pain is disposed to vary in its seat and its intensity, we have no hesitation

in prescribing copaiba, or means of that description.

Persons who have frequently had gonorrhœa may certainly employ the stimulating treatment with more safety and success while symptoms of inflammation remain, than those who have not previously suffered from the malady. This is analogous to what we observe in other diseases and in other parts. The history of the patient should therefore be investigated, and the surgeon should always particularly inquire the circumstances attending former claps, and the remedy that previously agreed the best.

Cubebs certainly agrees much better with some persons than with others. On some it appears to exert no influence—on others, the minority, its effects are excellent. We have little hesitation in prescribing it as soon as the discharge is becoming thin, although there is yet much smarting during the act of micturition. But we think that the patient should be briskly purged, at the time that the cubebs is exhibited.

We cannot agree with those who use injections of the nitrate of silver, in the early stages of gonorrhœa. We have frequently employed them, seldom with advantage, sometimes with injury. We dread their use. But, in cases where other means are failing, and chronic gleet discharge is established, the nitrate is occasionally beneficial. We usually begin with a solution of two grains in an ounce of water, and increase the strength to one of five or six grains in the same quantity. This usually renders the discharge again purulent, and increases or re-establishes the scalding. We then turn round, discontinue the injection of the nitrate of silver, and substitute for it a solution of lead. This not unfrequently effects a cure.

We have not yet spoken of the inflammatory complications of gonorrhœa—inflammation and abscess of the cellular tissue of the penis—inflammation of the absorbents of the penis—bubo—inflammation of the lacunæ of the urethra—inflammation and induration of the corpus spongiosum—inflammation of the prostate, the bladder, or the testis. Some of these are familiar, and

some are not. In the work of Mr. Wallace, (one meant to be elaborate,) several of these affections are not even noticed; a strange omission, equally observed in other works upon this disease. Our space will not permit us to pursue the subject farther at present, and for observations on some of the complications we have mentioned, we refer to two papers on the management of gonorrhœa, published by Mr. Henry James Johnson, in preceding numbers of this Journal.*

EXTRACT OF A LETTER TO THE EDITOR, FROM SIR DAVID J. H. DICKSON, M.D. &c. Physician to the Royal Hospital, Plymouth, 18th May 1835.

The following is some account of an interesting dissection of a case of phthisis which we lately met with, attended with pneumo-thorax, and displacement of the liver and stomach.

Mr. J. C. ætatis 30, assistant-surgeon, R.N. was admitted into this hospital, on the 3d of April, with symptoms indicating the last stage of phthisis, viz. great dyspnœa, cough, purulent expectoration, marasmus, &c. and died on the 29th of April, 1835.

Section Cadaveris, 28 Hours post Mortem. The right side of the thorax was evidently enlarged, and, upon opening it, a quantity of inodorous gas rushed from the cavity of the pleura. The lung, which was compressed into a small size, in the upper part of the cavity, lay close to the mediastinum and spine, to which it was firmly bound down posteriorly; while, at the same time, the fore-part was attached by two strong adhesive bands, passing to the anterior and upper part of the chest. The structure of the superior lobe was much condensed, and it was a mass of firm, crude tubercles, while, from the softening of those bodies in other places, the rest of the lung displayed several anfractuous excavations, traversed by bands, which seemed to consist of obliterated bloodvessels and indurated pulmonary tissue.

* Nos. 38 and 39.

In one of the largest of these vomicae, in the inferior lobe, there was an irregular opening into the cavity of the chest, caused by ulceration of the pulmonary pleura. The base of the cavern was of a denser structure, and puckered, with whitish ridges or elevations intersecting it.

There was about a pint of sero-purulent fluid in the right cavity of the chest, produced, I presume, by partial pleurisy, and mixed with shreds of coagulable lymph; for, corresponding to the part in which the patient had complained of pain, some portions of the costal pleura were reddened, and coated with a layer of false membrane.

Pleural adhesions, but easily separated, had, also, taken place on the left side of the chest; the upper lobe was tuberculated, and the rest of the lung was much engorged with blood and serum. I may here notice that the patient (who, on his admission, still indulged the "delusive hope of recovery," though in the last stage of phthisis) could only lie upon his back, or for a very short time on the left side, and not at all upon the other; and he several times observed, when within a few days of his death, that he felt as if he only breathed from a small portion of the upper part of the left lung. The heart was normal.

From the great depression of the diaphragm, caused by the pressure of the gaseous and liquid effusions in the right cavity of the pleura, the convex surface of the liver was much flattened; and this organ, which was healthy, was pushed from the right towards the left side. But the stomach was displaced in a much more remarkable degree, being quite on the left side of the spine—in fact it was found lying in the left hypochondrium longitudinally, and with its most depending portion almost extending to the superior border of the os ilii.*

* In one case of phthisis, I have found the stomach so remarkably enlarged and extenuated, that it nearly covered the whole of the intestines, and extended to the iliac fossa on each side, with the intermediate portion resting upon the pubes. It contained about a

The inner surface of the stomach presented a curious mamillated appearance, from numerous little prominences of the size of marbles, evidently caused by emphysematous infiltration of the submucous cellular tissue; for air escaped on puncturing them, and, by pressing these vesicular elevations with the fingers, they could be readily made to recede from one place, and to re-appear in another. Some portions of the jejunum, and much of the ileum, were injected, and of a deep red colour externally and internally; and the angry-looking, white, dotted patches on the outer, denoted, as usual, the seat of ulceration on the inner surface. Many of these ulcers were isolated, but the greater portion of the lower third of the ileum especially, where the patches of Peyer are situated, was abraded by numerous ulcerations, some of which had penetrated even to the peritoneal covering of the bowels. These ravages frequently extend beyond the ileo-cæcal valve, but they were not observed to have done so on the present occasion. For the large intestines were not diseased, though the transverse, and the descending colon especially, were much contracted.

Morbid appearances, though differing in degree, yet similar to those noticed above, supposed to arise from enlargement and chronic inflammation of the isolated and aggregated glands, or follicles of the mucous coat of the ileum, or from the deposition of tubercular matter in the submucous tissues, I have generally observed in the dissec-

gallon of fluid, and, with a small portion of the duodenum, removed with the pylorus (which was dilated, instead of being obstructed) was capable of holding fourteen pints of water; but, with the exception of a small portion of the great curvature, it was so extremely attenuated, that the peritoneal coat alone seemed to remain, and it gave way on attempting to preserve it by inflation. Two instances, strikingly similar, are adduced in M. Andral's *Memoir on Chronic Gastritis*, inserted in the Number for January, 1827, of the *Medico-Chirurgical Review*, vol. x. p. 159.

tions of phthisical patients; and those, as well as various other lesions of the alimentary canal, to which I must not now diverge, met with in the post-mortem investigations at this hospital, are skilfully delineated in the excellent pathological works of Dr. Carswell and Dr. Hope.

The mesenteric glands, from tuberculous deposition, had acquired an extraordinary increase of size in the present instance: many of them were the bulk of a nutmeg, and others were as large as a walnut. They accurately resembled the clusters of enlarged glands in the first figure of the third plate, in the fasciculus on Tubercles, published by the former of these able pathologists.

DAVID J. H. DICKSON.

LAST CURRICULUM FROM THE SOCIETY OF APOTHECARIES.

We have given the whole of this long and complicated document in an Appendix, since it must prove generally interesting to a wide circle of our readers. Advocating, as we have always done, an extension of the course of education, classical, mathematical, and medical, we hail, with joy and approbation, every approach to the object of our hopes and wishes. It will be obvious that the Court of Examiners are every year approximating to the scale of education which we have so often urged on the profession. If our readers will turn back to our January Number for the last year, page 280, they will there see what we have said respecting apprenticeships; and the present curriculum will shew that the Court of Examiners have *almost* become converts to the plan we sketched out in our April Number of last year, page 569. In that plan, we proposed that "the apprenticeship should be limited to two years." It will be seen that the Court has recommended the curtailment of the said apprenticeship to *two years and a half*—namely that the pupil should be liberated in the third year, in order to prosecute his studies in London or elsewhere. We recommended "three

academic years of study." The Court has adopted this proposal to the very letter. There are to be, not only *three winter sessions* of study, but there are to be summer sessions, not previously enforced.

Wishing, as we do, to see the whole profession regulated and superintended by one supreme council or academy, we nevertheless give great praise to the Court of Examiners for thus, as it were, anticipating much of what that academy will be likely to enact. The Company have, by this curriculum, placed the general practitioner on a level with the physician, in point of solid medical education—and, indeed, much higher on the scale than the physicians were, even within the last 20 years. This procedure must tend very much to diminish the influx into the ranks of the profession, by increasing the expense and elevating the education. The members will necessarily be more select and respectable. Such selection and respectability, were no legal enactments to take place by Parliament, will, in no long time, change the present disgraceful system of having medical remuneration charged entirely on drugs. Those who have incurred the heavy expenses attendant on an apprenticeship, and three academic years of study, will surely not stoop to the degrading system of druggery now imposed on them. They will throw off the yoke, even if the legislature decline to emancipate them! But it is hardly possible that the Parliament, while reforming Corporations generally, will let the medical corporations pass unnoticed. The spirit of reform is abroad—and, whether the pressure be from within or from without, the medical polity will be squeezed into some decent and rational shape before the expiration of two years from this time.*

* We could offer objections to some of the details of the present Curriculum, and especially to the plan of specifying the exact number of lectures, of which a course shall consist. This is too much like *weighing* rhubarb or jalap, in the shop of the Hall in Bridge-street.—Eps.

REMARKABLE CASE OF EXTENSIVE AND COMPLICATED ORGANIC DISEASE, ILLUSTRATING THE SYMPTOMS DURING LIFE. By R. BILLIS, Esq. Surgeon, Maidenhead.

[*This case came once under our own observation, and the symptoms were in strict accordance with those stated by Mr. Billis.—Ed.*]

By referring to our day-book,* I find our first attendance on Mr. S. was in May, 1832. He then laboured under general derangement of the chylopoietic viscera, which yielded in a few days to the usual treatment.

In the following July, he had the misfortune to break two or three of his ribs, and, although Mrs. S. informs us that Mr. S. never considered himself well after this accident, we did not see him again, professionally, till July, 1833, when we found him suffering from the following symptoms:—Loss of voice, difficulty of breathing, excessive pain in the back and shoulders, no appetite, &c. He only remained under our care for ten days, nor did he consult us again till last June. For some months prior to this, his health had been very indifferent, and he had consulted several medical men in London and Bath. His case now bore a very serious aspect; the symptoms above enumerated were very much aggravated, and the arterial system greatly deranged, palpitations, &c. being of frequent occurrence. Although these were present, more or less, in the previous attacks, we certainly did not consider them as indicating organic disease, but looked upon them as merely sympathetic. But now, having the patient constantly under our observation, we soon became convinced that there was organic disease, either of the heart or the large vessels. At this time he suffered very much from sickness, and alternate diarrhœa and constipation; the former ceased in a few weeks, but the latter continued till death, requiring the constant use of lavements. There were frequent sanguineous discharges from the bowels, and occasion-

ally substances somewhat resembling pieces of wax candles. Such is the history of the case up to January last, when he consulted Dr. Johnson. From that time his strength gradually declined, the symptoms continuing much the same, excepting the difficulty of breathing, which, a few days prior to his death, became distressingly painful, both to himself and those around him. The pulse at the left wrist could not be felt for a considerable time. The expectoration was small in quantity, and decidedly mucous. He died on the 20th April, æt. 50. I am informed that 14 years ago, he experienced a severe attack of acute rheumatism.

The treatment may be summed up in a few words:—Absolute rest, both mental and corporeal, was particularly recommended, but the patient's anxiety about his affairs prevented this being strictly enforced, as Mr. S. frequently transacted business, not only in his bed-room, but in bed, where he might often be seen surrounded by all the paraphernalia of an attorney's office. A light mild diet, and medicines to allay the more urgent symptoms, such as aperients, antacids, sedatives (particularly hydrocyanic acid and digitalis,) and anodynes were prescribed. He had accustomed himself to considerable quantities of opium.

Dissection. The body was very much emaciated, but did not present anything else externally worth noticing. The pleura pulmonalis and pleura costalis of the right side, were completely glued together throughout their whole extent: the left pleura contained a considerable quantity of serous fluid, but no fibrine. On the external surface of the inferior portion of the right lung was a large quantity of a whitish soft matter, (tuberculous infiltration,) of the consistence of soft brain: and separating this from the substance of the lung, was an ossific partition, rather more than two inches by one in extent, and a line in thickness.

The left lung was completely studded with very hard granulations, and here and there a tubercle in the crude state, but none absolutely broken down. The lungs generally were so much congested as to present the appearance of being

* Messrs. Bishop and Billis.

very much larger than natural: they were also (especially the right) loaded with mucus. The pericardium contained several ounces of fluid, and the heart was decidedly enlarged. There was a small osseous deposit in the base of one of the semilunar valves. There was an aneurism of the arch of the aorta which measured twelve inches in circumference, and another on the right side of the descending aorta, about the size of an egg. These (after macerating them in water, so as to completely remove the blood) I examined with considerable care. A considerable portion of the large aneurism was filled with coagulated lymph, and to the margin of this, but no farther, could the internal and middle coats of the aorta be traced. The fibrine being entirely removed, the external coat could be distinctly seen deprived of the middle and internal ones, but of extraordinary tenacity. The small aneurism was a good specimen of the true species, the three coats being entire over every part of it.

On the right side of the posterior portion of the aneurism it was firmly united to the trachea, and so thin was the separation between the interior of the one and the interior of the other, that the slightest touch with my finger made a communication between them.

I will just observe here that the patient appeared to die from suffocation.

I ought to have observed above, that the fibrine, when removed from the tumor, weighed six ounces, and was three quarters of an inch in thickness. The orifice of the left subclavian was completely plugged up. The coats of the stomach and bowels were remarkably pale and attenuated. There were curdants in the stomach which had been taken more than three weeks before death. There was a crude tubercle in the liver, and the spleen was small, and of a leaden hue.

It affords us great pleasure in being able to state that the prejudice against post-mortem examinations is fast subsiding. I have not met with a single refusal during the last three years, and in that time I have instituted at least a dozen, which, for a country practitioner, you must allow, is a tolerable number.

The result of the examination in this case was very satisfactory, as it justified the view we took of it, and confirmed your opinion as to the existence of an aneurism. Most of the leading symptoms may now be easily accounted for. The loss of voice by the pressure of the aneurism on the trachea: the dyspnoea, by its compressing the thoracic contents, and also by the disease of the left lung; the want of pulsation in the left radial artery by the plugging up of the left subclavian. The pain in the back and shoulder I confess my inability to explain; as the spine was sound, and if the pain had been caused by pressure on the brachial plexus, the arm would also have suffered. Vomiting and purging, in the early stage, we considered (judging from the state of the evacuations) occasioned by vitiated bile; and the constipation which succeeded was owing partly to there being a deficiency of bile (the liver was very small, and appeared to have been inactive,) and partly to the opium. The blood from the bowels, I imagine, must have been caused by piles, (no external appearance of which could be discerned) or arterial exhalation; and might not the substances, which I have described as resembling wax candles, have been tuberculous matter, secreted by the mucous membrane of the bowels?

B. BELLIS.

CASE OF APPARENTLY SECONDARY SYMPTOMS AFTER GONORRHOEA. By H. J. JOHNSON, Esq.

The rarity of secondary symptoms as a consequence of gonorrhoea has been dwelt on at some length in a preceding article. I hardly know whether to bring forward the present case as an instance of the occurrence of such symptoms, or not. The case itself is yet in progress, and no definite conclusions of any kind can be drawn from it.

Eight months ago, a gentleman placed himself under my care on account of gonorrhoea. There were only slight inflammatory symptoms, and it seemed to be a simple and mild attack. He had once previously suffered from the

complaint. I need not mention the treatment employed, as it merely consisted of the ordinary remedies. Gleet, however, succeeded to the purulent discharge and scalding, and upwards of two months elapsed before this had completely disappeared.

Two months ago, three or four months after all the symptoms of gonorrhœa had ceased, a bubo formed in the left groin, and in spite of all remedies and the utmost care, it advanced to suppuration. I opened it with the lancet, and the wound slowly healed.

About a month ago, the bubo being then open, the mucous membrane of the lower lip at its commissure with the gum, and the gum itself opposite the third molar tooth on the right side of the lower jaw, exhibited each a small yellow ulceration, resembling what mercury sometimes produces. The ulcer was hollow, yellow on the surface, and exhibited a thin, rather undermined edge. The throat felt sore, but no distinct ulceration was perceived in it. These ulcers were slowly healed by the application of the lunar caustic, when, suddenly, the right knee and left elbow were attacked with acute synovial inflammation accompanied with much effusion in the joint.

The patient's condition at present is this. There is slight ulceration still in the gum, but none on the mucous membrane of the lip. The bubo is quite healed. There is not, and there has not been since the disappearance of the discharge, five or six months ago, the slightest symptom of any thing wrong in the urethra. The synovial inflammation of the knee and elbow has abated, but is still severe.

The patient's health is but indifferent, and he seems to have been rather addicted to intemperance.

Such are the principal facts of this case. I should observe that the patient has taken no regular mercurial course, but I gave him mercurial purgatives freely in the early stage of the gonorrhœa. After the bubo was laid open, he was ordered sarsaparilla in combination with the liquor potassæ.

Is this to be regarded as an instance of secondary symptoms after gonorrhœa; or may those symptoms be

deemed the effects of impaired constitutional power? They certainly present features very different from those of secondary syphilitic symptoms; for in syphilis, bubo is commonly an early symptom, ulcers seldom occur in the mouth independently of other ulcerations in the throat, and synovial inflammation is chiefly observed in persons broken down by the injurious operation of mercury. On the other hand, it is difficult to believe that such phenomena as occurred in the case I have related, have merely had their source in a bad state of health. Such effects are too rarely seen from such a cause to induce us to assent readily to such a supposition.

The observations of Sir Benjamin Brodie are sufficient to establish the occasional occurrence of synovial inflammation, in connexion with gonorrhœa. Yet so far as I have seen, the cases that occurred to that able surgeon, were more severe than they usually are. Within this last year I have seen three instances of this description. In one the ankles and one knee were attacked—in the second the left knee was the seat of inflammation—and in this, the third instance, the affection has hitherto been limited to one elbow and one knee. The first patient speedily recovered under colchicum and blisters—the second was confined to his bed for a month, and then recovered completely.* The third is still labouring under the complaint, which, however, appears very far from intractable. In the two first patients there was inflammation of the conjunctiva of both eyes, but in neither was much purulent discharge established.

Leeches, blisters, calomel and opium, and saline purgatives, with colchicum, have appeared in these and in other cases that have fallen under my observation, to exert almost as great an influence, as in ordinary rheumatic inflammation. At all events they removed the disease in a moderate period of time.

* This patient had purulent ophthalmia in connexion with a former gonorrhœa; and his brother had suffered severely under gonorrhœal rheumatism.

II.

SPIRIT OF THE FOREIGN PERIODICALS, &C.

ABSTRACT OF M. BOUILLAUD'S CLINICAL COURSE AT THE LA CHARITE' HOSPITAL, DURING 1834.

DURING the five months, beginning with April, for which the clinical course lasted, 260 new patients were admitted into the Professor's wards. Of these, 191 were males, and 69 females. The number of acute cases was much greater than that of chronic ones; in the proportion of 200 to 60. There were but few cases of cerebral disease. Two of cerebral congestion, each of them treated with a large bleeding from the arm, with leeches applied behind the ears, cold vinegar lotions to the head, and sinapisms to the feet, were cured in from five to seven days. Two men and one woman presented the symptoms of acute inflammation of the brain and its meninges, complicated with some signs of gastro-enteritis. The treatment adopted was as follows.

Case 1. A man. Bled thrice; 12 ozs. each time—forty-four leeches to the temples—cupped twice over the region of the heart—two blisters to the thighs—ice and the affusion of cold water on the head—enemas containing a portion of musk—died on the tenth day.

Case 2. A man. Bled twice; 8 ozs. each time—twenty leeches to the temples—cupped twice over the region of the heart—two camphorated blisters—cold lotion to the head—musk enemas—cured in 12 days.

Case 3. A woman. Four applications of twenty-five leeches behind the ears—sixteen leeches over the region of the cæcum—sinapisms to the feet—ice and cold water applied to the head—died on the 18th day.

The dissection of the two fatal cases revealed in each a highly congested state of the cerebral membranes, and a deposition of serosity in the meshes

(dans les mailles) of the pia mater. The substance of the brain to a greater or less extent was of a red colour; its grey portion was softened. Such are the usual post-mortem appearances after phrenitis. The lesions found in the abdominal cavity were by no means very serious in either case. The intestinal complication was therefore merely accidental, and could not be justly considered the cause, (as it certainly is in numerous examples of typhoid fever, or follicular enteritis,) of the cerebral affection.

Some time ago, there was a case of cerebritis under the care of M. Bouillaud, which terminated in paralysis of the face, and of the inferior extremities. On dissection, the upper extremity of the spinal marrow was found in a state of ramollissement.

The next set of cases which we shall review, are those, in which the respiratory passages, or the pharynx were the seat of disease.

Four men and two women affected with tonsillitis were admitted. One local bleeding, and the application of a few leeches to the throat, were sufficient for the cure in every case. In one case, an emetic of ipecacuan was administered; but apparently without any marked effect on the duration of the malady. Fourteen cases of bronchitis, seven in persons of either sex, were speedily cured by the mere employment of soothing emollient remedies. Two cases only required general or local bleeding.

Out of twenty-six cases of pleuropneumonia, only three occurred in females. One half of the cases were admitted in April; and only three during the months of July and August. The duration of the disease at the time of the patient's admission, was very different in different cases: thus in one, it had existed only two days; in seven, three days; in nine, four days; in one, five days; in two, six days; in three,

seven days; in one, eight days; and in two, nine days. From the third to the fourth day appears therefore to have been most frequently the date, at which the patients applied for relief. The stage of the disease, at the period of admission was equally variable. In five cases, the disease was in the first stage, that of inflammatory congestion; in seven it was passing from the first to the second, that of the red induration, or hepatization; in nine, the second stage was fairly confirmed; in three, the transition from the second to the third, that of suppuration, or purulent infiltration, had commenced, and in two, the third stage was quite established.

Of the 26 cases, in thirteen the inflammation occupied the right lung; in seven, the left; and in six, both lungs. Seven times it was confined to the inferior lobes; twice, to the superior lobes; and eleven times, the entire substance of one lung was involved.* Of the six cases of double

pneumonia, in four the inflammation was seated in the bases of the two lungs; once in the summits; and in the remaining case, the entire lung of one side, and the base of the other were affected.

We come now to speak of the treatment which was pursued in these cases of pneumonia; and first, with regard to general bleeding. The number of times, that venesection was ordered in any one case, varied from nine to two.

The average number was four or five. In almost every case, copious leeching was employed simultaneously; sometimes as many as 50 or 60, at other times not more than 20 leeches were applied over the seat of the greatest pain, or directly over the region of the heart.

In the majority of the cases, cupping also was resorted to. The rest of the treatment consisted in the occasional use of blisters, and in the administration of croton oil as an active purgative.

* These data agree in the main, with the conclusions which M. Chomel in the *Art. Pneumonie*, *Dict. de Medecine*, announces to be the results of his enquiries. Morgagni has stated that pneumonia occurs more frequently on the right, than on the left side. Of 27 fatal cases examined by Chomel in the Winter, 1812-13, in thirteen, the right lung only was found affected; in seven, the left one only; and in the remaining nine, the inflammation had attacked both lungs, the right one however being generally more seriously injured than the left one. M. Andral's conclusions coincide with those of Chomel and of Bouillaud. He is of opinion that pneumonia on the right is, at least, as common again as the disease on the left side.

With respect to the comparative frequency of the inflammation in different portions of the lungs, the following are the results of fifty-nine fatal cases examined after death by M. Chomel. In 13, the inflammation occupied the summit of the lung; in 11, the base; in 31, the entire lung; in three the

posterior edges of both lungs; and in one, the middle portions of both lungs. From these facts, it seems that inflammation more frequently attacks the summits, than the bases of the lungs; but on this subject M. Chomel observes, that, independently of the too small number of his observations to warrant any decided conclusions to be drawn from them, if inflammation of the upper lobes is more frequently fatal than that of the lower lobes, we cannot judge very accurately of the relative frequency of the two sets of cases, merely by post-mortem examinations. M. Andral has collected the reports of 88 cases, some of which proved fatal, but the greater number terminated successfully; and of these, the inflammation appeared to occupy the lower lobes, 47 times; the upper lobes, 30 times; and the entire substance of one lung, 11 times.

The attentive reader will doubtless compare these results respecting pneumonia, with the results of Louis' researches on the relative frequency of tubercular disease on the two sides of the chest, and in different portions of the lungs.

Two only of the 26 cases proved fatal. The average duration of the treatment was about 8 days, the longest period being 14, and the shortest 4 days.* During the latter months of the clinique, M. Bouillaud gave a decided preference to cupping, as a means of local depletion in pneumonia, over leeching. The impression thus made on the disease is more speedy and decided; and, moreover, the exact quantity of blood drawn can be more easily ascertained.

Simple *pleurisies* were less frequent than inflammations of the lungs themselves. There were only four cases admitted during this clinique; three of these occurred in men, and one in a female. In two of the cases, the pleurisy was simple and uncomplicated—in one, it was associated with pericarditis; and, in another, with acute rheumatism. These cases of pleurisy did not require such active depletion as the cases of pneumonia. The application of a blister once, or oftener, was practised in all the cases. Independently of these four pleuritic patients, there was a fifth, who had been admitted before the commencement of the clinical course, and in whom a fatal pleurisy was induced by rupture of a pulmonary tuberculous excavation.

The number of cases of *acute rheumatism*, or, as it ought rather to be called, of *arthritis*, admitted during the five months, from April to September, was sixteen. Eleven were in men, and five in women. One case only occurred in April, five in May, three in June, five in July, and two in August. In all the cases, the articular inflammation having appeared at first in one joint only, affected, in its progress, almost every other joint of the body. To the treatment of acute rheumatism by vigorous antiphlogistic remedies, it has been objected that, whenever they have effected a speedy cure, the disease had

already existed for a considerable time. It is, therefore, important to determine its duration, in each of our sixteen cases, at the date of their respective admissions into the hospital. In three, it had existed for 3 days—in three, for 5 days—in six, for from 6 to 8 days, and in four for 15 days. The treatment consisted in vigorous depletions of blood, general as well as local. The largest quantity of blood drawn, in any case, was 94 ozs.—about 14 ozs. at seven different times; the smallest quantity was 14 ozs. drawn at one bleeding. The quantity usually drawn at a time was between three and four palettes (a measure holding four ounces.) The number of leeches applied, in any one case, varied from 157 to 12; and the frequency of cupping from once to three times. The remainder of the treatment consisted in blistering, compression combined with mercurial inunctions, the endermic use of morphia and baths, as external remedies, and in the internal exhibition of opium, morphia, Dover's powder, and occasional purgatives. The duration of the treatment, after admission into the hospital, varied from 7 to about 16 days; in one case, where the affection was limited to the two wrists, it was continued during 23 days; and in another case, where the disease was in a subacute form, and confined to one knee only, it lasted for 17 days. It is worthy of notice that, in the latter of these two cases, no general bleeding was practised, and the treatment consisted in cupping three times, and in employing compression along with mercurial frictions; and that, in the former, the patient, in whom the disease was confined to the two wrists, was bled six times—in all, to the amount of 80 ozs. In conclusion, it may be stated, the average quantity of blood drawn was about 42 ozs. at three separate operations, besides 6 or 8 ozs. by the cupping-glasses, and the discharge from between 20 and 30 leech-bites. The average duration of the treatment in the hospital was 11 days; and of the disease, from its commencement, about 19 days. (The English physician will, no doubt, be surprised to find that, in none of the cases of

* This announcement, the truth of which cannot be gainsayed, exposes the error of those who state that recovery is always tedious, after "un traitement energiquement antiphlogistique."

acute rheumatism alluded to in this report, was any form of mercury or of colchicum employed. Both are remedies of great power. The almost immediate cessation of the most severe articular pains on the supervention of salivation, must be well known to every practical man.—Rev.) There is a circumstance in the history of acute rheumatism, which, of late years, has attracted much the notice of physicians—we mean, the very frequent co-existence “d’un trouble du côté du cœur.” This complication consists sometimes in well-marked (*franche*) pericarditis, or in an endo-carditis (inflammation of the serous investiture of the cavities of the heart,) and, at other times, in an increase of the enlargement and induration of the valves (the consequences of a former attack of endo-carditis), or in the presence of organized coagula within the ventricles of auricles. As to the predisposing cause of these cardiac lesions in acute rheumatism, we believe it may justly be traced to the analogy of structure which exists between the serous membranes of the heart and the synovial membranes of the joints. According to the apt expression of M. Bouillaud, the heart, enveloped in the pericardium, may in some respects be viewed as a “*veritable articulation*; car on trouve dans ce système d’organes des mouvements, des surfaces qui glissent l’une sur l’autre, une membrane sereuse, et un tissu fibreux qui la double.”

Twelve cases of *acute erysipelas*, six in persons of either sex, were admitted. In nine, the disease occupied the face, and, in the remaining three, the superior extremities. Phlyctenæ appeared in a few of the cases. In all, the disease was strongly marked, and all of them yielded to an active antiphlogistic treatment. One of the men lost 72 ozs. of blood by two bleedings from the arm; and several of the other patients were bled three or four times, usually to the amount of from 12 to 16 ozs. at each operation. The application of large numbers of leeches to the inflamed parts was of signal utility. The treatment lasted for from 4 to 14 days, the average period being six or seven.

Among the cases of exanthematic disease, there were eleven of *small-pox*. (It appears that small-pox was prevalent in Paris during the Spring and Summer of last year.)

Of these eleven cases, four occurred in persons who had been vaccinated, and of these four cases, one was of the severe confluent form of the disease. In almost all the cases, the eruption was very copious, and in four it was confluent. Three of the confluent cases of the disease occurring in unvaccinated patients, proved fatal. In one-half of the cases, the treatment consisted in the mere use of gentle emollients—in the other half, the detraction of blood, either at the commencement or during the progress of the disease, at the setting in of the secondary fever, was necessary. Thus, when the eruptive fever was very intense, and the eruption promised to be very copious, a bleeding of from 12 to 16 ozs. was practised; and, whenever there seemed to be any tendency to congestion within the head, a number of leeches were applied behind the ears. “I cannot,” says M. Pelletan, the reporter, and he doubtless expresses the sentiments of his preceptor, Professor Bouillaud, “now boast, as I have hitherto done, of the utility of the antiphlogistic treatment in small-pox; there is a something else, besides mere inflammation, present in this disease. This *something* is of a specific nature. The blood has become altered in its qualities; for, if we examine it after it has been drawn from the arm, it will be found to be, not firm and dense, as in genuine inflammations, but soft, diffuent, and having all the characters which it usually presents in typhoid enteritis.” The inhalation of chloruretted vapour was found to be a very useful remedy in most of the cases—it tended to cleanse the throat and mouth more effectually than any other means.

In nine cases of measles, six of which occurred in males and three in females, the accompanying bronchitic affection was invariably present to a greater or less degree. In two it was extremely severe, and both patients died asphyxiated. In one case, the rubeolus rash

was complicated with miliaria, and, in another, with scarlatina, and with cynanche tonsillaris. The danger of measles is always proportionate to the severity of the accompanying bronchitic affection; but let it not be forgotten that the antiphlogistic treatment, although the only safe practice in such cases, has not the same control over the pulmonic complication of rubeola (which, and such like varieties of the disease, might be appropriately called "peripneumonia notha," instead of the subacute form occurring in old people,) that it exerts over the open and idiopathic inflammations of the lungs.

[This is an important concession on the part of a Broussaisist. We may soon expect a considerable modification of the original tenets of this talented but one-sided physician.—REV.]

Three cases of sciatic neuralgia were cured by the acetate of morphia, used *endermically*.

Five cases of ague were speedily cured. In one case, the febrile paroxysm was arrested by the application of the sulphate of quinine to the denuded cutis; and in another by digitalis, used in the same method, and likewise taken internally at the same time.

Three cases of lead colic yielded speedily to the employment of croton oil and of opiates.

Three cases of chorea, two in females and one in a male, were successfully treated with etherial potions, pills of valerian, and lavements, containing musk, camphor, and assafoetida.

The cases of "embarras gastrique," or of slight gastritis, amounting in all to twenty, did not present any remarkable phenomena. Seven of the cases were treated with one or more emetics of ipecacuan; but these cases did not recover more quickly than ten in which a mere emollient treatment was pursued. In the remaining three cases, the symptoms being rather more urgent required the application of leeches to the epigastrium.

Under the term of gastro-duodenitis, M. Bouillaud arranges that form of typhoid fever which exhibits a bilious type or character, and which is denoted by pyrexia, accompanied with sickness,

bilious vomitings, great depression, an icteric discoloration of the skin, and a sense of weight and distress in the epigastric and hypogastric regions. This form of fever is not so dangerous as that whose pathological seat is in the mucous glands of the intestines, and which is so well known, in the present day, by the names of follicular enteritis, entero-mesenteritis typhoidea, dothi-enteritis, &c.

Fourteen cases of the genuine gastro-enteritis were admitted, and they were all successfully treated. In nine, venæsection to the amount of 14 or 16 ozs. was deemed necessary, once or oftener; and local depletion of blood, by leeches or cupping, was very generally combined with it. On the whole, however, this form of disease does not require a very active depletory treatment. It was remarked that three of the cases, in which emetics and purgatives were employed, were of more tedious recovery than the rest.

Of the follicular enteritis, no fewer than 32 cases were received into the clinical wards. Of this number, nine only occurred in females. All the patients, with the exception of two, were young—their ages being from 17 to 25. The two oldest were only 37 years old. With respect to the treatment pursued, we may state that, on the average, each case required two general bleedings, the application of 28 leeches to the abdomen, and one cupping. To these means were added the occasional use of blisters, sinapisms, and chloruretted baths. Five out of the thirty-one cases proved fatal.

It is to be particularly noticed, in estimating this proportion of mortality in Bouillaud's practice, that, contrary to the custom of many physicians, he does not reckon among the proper typhoid fevers, those cases which we discussed in the preceding section, viz. the gastro-duodenitis or bilious fevers, and of which not a single example proved fatal.

An abridged report of one or two of the cases of the follicular enteritis, will better explain M. Bouillaud's practice than any general description.

Case 1. This patient was admitted on the 8th day from the commencement of his illness. The symptoms were, extreme debility and exhaustion, tendency to stupor,—the lips, teeth, and tongue were parched, the latter was covered with a yellowish coating in the middle, the edges being red—the skin was dry and burning—pulse 84—intense headache, and tinnitus aurium—extreme thirst—abdomen tender and tympanitic: a gurgling noise heard, when the ileo-cæcal region was pressed—diarrhœa, of several days' standing, troublesome, but not so severe as it had been; sleeplessness, and tendency to delirium.

After he had been bled, the heat of the skin abated considerably, and there was less headache and prostration of strength. Thirty leeches were now applied on the abdomen. The tongue became moist, and rather cleaner; the saliva, which hitherto had been acid, no longer reddened litmus paper. On the following day, twenty more leeches were applied on the abdomen, and these had the effect of removing the tympanitic distention, the gurgling sound, and the looseness of the bowels. In the course of a few days, this patient was quite convalescent.

[*Remarks.* This case appears to us to have been one of mild typhus, the typhus mitior of Cullen; and certainly did not exhibit the "extreme gravité" assigned to it by the French reporter. The symptoms scarcely warrant us in affirming that there was any inflammatory affection of the intestinal mucous glands.—REV.]

Case 2. The patient was admitted on the sixth day of the disease. In addition to the symptoms which were present in the former case, there was a most extensive bronchitic affection; on the right side there was an incipient pneumonia, indicated by a distinct crepitant râle on auscultation, and by the peculiar, viscid, rust-coloured sputa. The lungs and the intestines were, therefore, very seriously affected in this case; and, if we add that the patient's constitution was soft and lymphatic, that his character was "d'une pusilla-

nimité honteuse," and that the little intelligence he possessed was uniformly employed only "à nous tromper, pour satisfaire sa gourmandise et sa voracité," the reader may form some idea of the difficulty which was experienced in the treatment. The first and most urgent indication was to relieve the pulmonic congestion; else the dyspnœa might have soon become suffocative. The patient was, therefore bled three times, to the amount, in all, of 44 ozs. in the first 24 hours, and about 8 ozs. of blood were taken by cupping also. This active treatment so effectually quieted the pulmonary symptoms, that the whole attention might now, with safety, be directed to the abdominal distress. But, in consequence of the repeated imprudences of the patient, this was not very easily effected. He became so extremely feeble, that, for several days, his life was in very imminent danger. Several eschars formed on those parts of the body on which he pressed, when lying. The use of the chlorurets, both internally and externally, was steadily persevered in, and eventually with the happiest effects. The recovery however was very tedious.

Case 3—we are told, was an example, "non moins grave, de cette terrible maladie." The disease had commenced eight days before her admission into the hospital, with diarrhœa and bilious vomitings. Her actual state was as follows:—Features pale, shrunk, and inanimate, exhibiting a yellowish discoloration on the *alæ nasi*, and the lower part of the face; mind confused, and, as it were, oppressed, so that her answers were slow and incomplete; the skin was dry and burning; pulse 120, feeble; tongue dry, red at the edges, and having a white coating in its centre; mouth parched; breath fetid; saliva acid; nausea and occasional bilious vomitings; epigastrium distended and painful; the whole of the abdomen more or less tender, especially over the ileo-cæcal portion, where a gurgling noise was produced by pressure; severe headache, vertigo, restlessness, and stupor, alternating with occasional delirium.

As to the lungs, there was nothing very worthy of notice; the breathing was very hurried, and each act of inspiration was incomplete and jerky (saccadé.) The patient was bled to the amount of ten ounces, but without any manifest change in the symptoms. Twelve leeches were then applied over the cæcum: the tympanitic distention and gurgling abated in consequence; but the general state was not affected. Twenty-four leeches were re-applied to the iliac regions; but no amendment followed. Next day, there was considerable subsultus tendinum in the shoulders, arm and face; the adynamia had become extreme; the urine was ammoniacal, and the coma was constant, except when it gave way to delirious excitement. Blisters had been applied to the calves of the legs and sinapisms to the feet; and the chloruret of soda had been used both inwardly, and as an external application to the surface of the body. The blistered surfaces had become threatened with gangrene; but this tendency was fortunately arrested by employing dressings of camphorated spirit and cinchona. Contrary to all expectation, this patient began to exhibit signs of recovery. The pyrexia abated, the diarrhœa and bilious vomiting ceased; the tongue became moist and clean, the saliva lost its acidity, the appetite returned, and the urine resumed its healthy properties.

The following case, though not strictly belonging to the present section, may be introduced here with advantage.

Case 4. Intense choleric form peritonitis, induced by perforation of the intestines. A woman 58 years of age was sent into the hospital from the country, as a genuine cholera patient. The symptoms were, utter prostration; the eyes sunk and glazed; the arms and hands icy-cold and bedewed with a moisture; the tongue cold, and of a purplish-colour; the pulse quite imperceptible; frequent efforts to vomit, the rejected matter consisting of green bile mixed with flocculi; the abdomen hard, distended, and tender on the slightest pressure. On the evening previous to her admission, this woman had

been suddenly seized with violent colicky pains, during the continuance of which, she had, at three different times, voided some blood per anum, also with vomiting, difficult enuresis, &c. She stated that for some time past she had been subject to dyspepsia, frequent recurrence of vomitings, and excessive constipation, and to a gradual loss of all her strength and energies. The symptoms of her present attack became more and more alarming, and she died during the first night she was in the hospital.

Considering the extreme rapidity of the disease, the patient's previous state of health, viz. the obstinate constipation, and the bloody stools following an attack of severe colic, and coupling these facts with the present existing symptoms, which denoted an intense peritonitis, M. Bouillaud suspected that the contents of the intestines had become effused into the abdominal cavity; a suspicion which was amply confirmed by the post-mortem examination. Besides the marks of an intense peritonitis, the mucous coat of the intestines was found covered with myriads of insulated minute follicles.

The whole extent of the large intestine was loaded with indurated faecal matter, and on tracing it to the rectum, a large opening was found in that portion of the gut which is in contact with the uterus. This opening was as big as a five-franc piece, and the edges were livid and gangrenous. A quantity of the fæces had escaped into the cavity of the pelvis. The other lesions do not require particular notice.

This case is instructive, as exemplifying an error, into which medical men are too apt to fall; viz. that of attributing, during the existence of any epidemic, every case whose symptoms are analogous to those of the prevailing disorder, to one exclusive cause.

Having now mentioned all the cases of acute disease, which were admitted during the clinical course, it only remains to allude to the *chronic* cases. Tubercular phthisis and organic affections of the heart were perhaps the most numerous of these. The treatment of such cases, as were not manifestly incurable, consisted in occasional

local bleedings, and the internal use of digitalis. Some cases of chronic inflammation of the stomach and bowels, illustrated the benefits of the endermic employment of morphia, and of mercurial inunctions. One case of ascites, which had followed an obstinate chronic peritonis, was much relieved by the rubbing in of the ung. hydrargyri over the whole abdomen; and another, which was dependent on enlargement of the spleen, was benefited by the use of diuretics after the operation of paracentesis.—*Journal Hebdomadaire*.

M. LOUIS ON THE EFFECTS OF BLOOD-LETTING IN PNEUMONIA, &c.

The therapeutic effects of sanguineous depletion, have been alternately praised and disparaged, to an extravagant and unjust degree, merely according to the doctrinal views of physicians, and with far too little regard to the specialities of the prevailing disease, or of the individual cases. Of late years, the subject has been studied with more than usual care. M. Louis, whose character we have already exposed in the present number of our review, has for some years past been endeavouring to submit to numerical, or arithmetical accuracy, the results of blood-letting in various inflammatory disorders, and more particularly in pneumonia. His earliest paper on this subject appeared in the *Archives Generales de Medicine* for 1828.

The bleedings which M. Louis employed in most of his cases, were, as we shall presently see, small, but frequently repeated; and the results of the remedy so practised were certainly far from being encouraging. The proportion of deaths was nearly one in every three cases. Not discouraged however by want of success, he has diligently continued his enquiries, respecting the curative effects of bleedings in small quantities,* in pneumonia,

cynanche, erysipelas, &c., and he has recently published an account of his experiments, in a separate brochure, entitled "*Recherches sur les Effets de la Saignée dans quelques Maladies Inflammatoires, &c.*" The first chapter of this memoir is a reprint of his former paper, and contains the reports of 78 cases of pleuro-pneumonia.

Of these 28 proved fatal; or rather more than one in every three cases. All the patients were treated by bleedings, "*pratiquées comme on le fait ordinairement*;" that is, in small quantities, generally of from 10 to 15 ounces. One patient only was bled so often as seven times.

Three patients were bled 5 times.

Twelve 4 —

Sixteen 3 —

Thirty-four 2 —

Ten 1 —

Thus it appears that the number of those who were bled only once and twice, exceeds very considerably, the aggregate of the other cases, in which venæsection was practised more frequently. We shall now briefly state the immediate results of these bleedings. The duration of the pneumonia appears not to have been much influenced by them. When the patient was bled before the fourth day of the disease, it usually lasted 17 days; when not bled, until or after this date, the usual duration was about three weeks. The pain was in no case suddenly arrested (*jugulée*) by the venæsection; but the speediness of its cessation was always in proportion to the earliness of the practice. Thus it usually continued for

with the extraordinarily unpropitious results of blood-letting, as practised by M. Louis, and by many of the other Parisian physicians, was induced to ask the question, whether by changing the *method*, without changing the *means*, we might not hope to be more successful. He has most satisfactorily resolved this most interesting medical problem, and has proved by the most unanswerable argument, the simple deduction from a multitude of facts, the immense superiority of blood-letting "*à haute dose*."

* The French reviewer adds; "we say, in small quantities; for it is well known that Professor Bouillaud, struck

about six days, when the patients had been bled during the first four days of the disease, and rather longer than eight days, when the bleeding had been delayed beyond this period. Some of the other symptoms, especially the characters of the sputa, were similarly influenced, according to the promptitude or tardiness of the treatment. The "crachats, visqueux, rouillés, ou marmalade d'abricots," continued for five days, in those patients who had been bled during the first three days, and for six or more days, if the bleeding had been delayed. The characters of the sputa became more marked and distinct after bleeding, in the greater number of those cases where it was employed near the commencement of the disease; and, on the contrary, they were less apparent on the day after the operation, in the cases where it had been delayed. M. Louis very justly attributes these differences to the circumstance of the disease being farther from, or nearer to, its term or issue, in the two sets of cases. Similar remarks may be made as to the effects of bloodletting employed at different periods of the disease, on the auscultatory signs of the disease, such as the crepitation, the resonance of the voice, the ægophony, the dullness on percussion; and also on the state of the pulse, and the heat of the surface.

Sometimes all these symptoms became very much mitigated, soon after the blood was drawn, if the operation had been performed "au debut" of the pneumonia.

So much for the effects of the remedy in this disease. In the cases of erysipelas of the face, recorded by M. Louis, the influence of sanguineous depletion, either on the duration or the event of the disease, appears to have been very feeble indeed. Bloodletting was employed in 21 out of 33 patients; and the only result obtained from its adoption, was a very inconsiderable shortening of the duration of the malady. A similar remark is applicable to the cases of cynanche in which it was practised. The disease was only shortened by about one day.

The second chapter is occupied with

the reports of all the new cases, or of those which have been treated by M. Louis from the year 1830 to 1833. The amount of the bleedings was, in general, larger than had been employed in the preceding cases, and the *success has been correspondingly greater*. Of 29 patients, four only died. The largest quantity of blood drawn at once was 20 ozs. This was done in three of the cases; in the others, the average quantity was about 16 ozs. at each operation. On the whole, the entire quantity was considerably greater in this, than in the former set of cases; and the more immediate results of the remedy were proportionately more satisfactory. The duration of the pneumonia, when the bleeding had been practised from the second to the fourth day of the disease, was, on the average, between fifteen and sixteen days; and, when it had been delayed until from the fourth to the seventh day, between 18 and 19 days.

The persistence of the individual symptoms, such as the pain, the peculiar expectoration, the crepitation, bronchophony, the state of the pulse, &c. was also somewhat shorter in the present series of cases. The four patients who died, had not been bled until after the fourth day from the commencement of their attacks.

Viewing the two sets of cases reported in M. Louis' memoir in connexion with each other, we cannot fail to put the question to ourselves—whence the difference in their results? The obvious, at least to us, conclusion seems to be, that the more vigorously and decidedly the depletory plan was pursued, the more successful was the practice. The author, however, takes a somewhat different view of the question; and he attributes the greater success, in the latter series of cases, to the employment of the tartrate of antimony (given in from 6 to 12 grains in the course of 24 hours); although, according to his own admission, the disease lasted, when this medicine was employed, three days longer than in those cases where it was not used at all—an event which M. Louis explains by stating, that the exhibition of the antimonial had been de-

layed too late, viz. until after the fourth day of the disease. But there is surely some degree of inconsistency in these reasonings. If the duration of pneumonia was prolonged three or four days, where bleeding had not been practised until the fourth day, we need not certainly seek for any other interpretation of the tardy cure of certain cases.

At the close of this section, M. Louis alludes to the action of blisters in pneumonia. He is of opinion that they have not any beneficial influence on the disease. He has, therefore, abandoned the use of them, not only in pneumonia, but also in pleurisy and pericarditis; "car," says he, "un examen rigoureux des faits m'atoujours convaincu, que les affections inflammatoires aiguës, loin de préserver de l'inflammation les organes qui n'en sont pas affectés primitivement, en sont une cause excitante." From this, it seems that M. Louis regards the effects of a blister as identical with an active inflammation. Surely this is not correct.

Such is the brief review of the leading assertions in M. Louis' memoir. The conclusions to be drawn from the whole enquiry are certainly not very encouraging, either to patient or doctor. If the mortality of pneumonia, a disease so frequent and so common, amounts to one-third of all those affected with it, medical men ought surely to renounce the ancient regime of treatment, and make an experiment, at least, of other means. Hitherto, but little progress has been made in this inquiry. The tartar-emetic, indeed, has been extravagantly eulogized by some, as almost infallible: but our author who is decidedly, and, we may add, very properly, partial to its use, candidly admits that the cases treated chiefly by it, were quite as tardy in recovering as those where it was not administered. Nevertheless, it is a most potent and useful remedy, and is admirably adapted to such cases as are not well fitted for large depletions of blood. But we need not despair. We have in our possession a remedy which has been long known, and is continually employed, but the full value of which M. Louis, and, per-

perhaps the majority of French physicians, have not yet fully estimated. This remedy is no other but venæsection; but venæsection "*à haute dose*," and not "*à petite dose*, comme on le fait ordinairement." The very circumstance of a physician, so eminently distinguished for all the attributes of a good practitioner as M. Louis, having been so unsuccessful in the treatment of pneumonia, "*comme on le fait ordinairement*," must satisfy every one that the "*methodus medendi*" is faulty somewhere.

His unquestioned integrity is a sufficient voucher for the authenticity and correctness of the facts; and his practical talents for the skill with which the remedies were employed. Fortunately there are other facts, equally authentic and correct, facts which have been confirmed over and over again, and of which numerical tables, as copious and as exact as any detailed by M. Louis, have been kept; and the results of these are far more encouraging than those which we have hitherto been contemplating. Venæsection has been the instrument which has enabled us to obtain these results; but venæsection not small and imperfect, but "*portée à haute dose*." To Professor Bouillaud belongs the merit of having first distinctly demonstrated the efficacy of large bleedings in pneumonia. (We shall not deny the justice of this claim, in reference to our brethren in France; but its ridiculous impudence, if it intended to apply to other countries, is too obvious to need any refutation: [be it remembered that the claim is advanced in a periodical, under the management of M. Bouillaud himself.—*Rev.*] The average quantity of blood he draws in pneumonia, may be stated at rather more than four pounds and a half; whereas, in the practice of M. Louis, this quantity seldom exceeds two pounds and a half. The average mortality, among M. Bouillaud's patients, is not greater than in the proportion of one to eight and a half, which is considerably lower than even in the second series of M. Louis' cases.

Moreover, the medium duration of the

disease, in the wards of La Charité, is from 8 to 12, and not from 18 to 20 days.

With respect to M. Louis' condemnation of blisters in pneumonia, it deserves notice, that they were rarely used, unless in cases which, "peu influencés par la saignée, laissaient des craintes sur l'issue." In the practice of M. Bouillaud, blisters have been found of very signal advantage.—*Journ. Heb.*

Since writing these observations, we have read an able letter on the subject of M. Louis' memoir, published by one of his former pupils, M. Donné. We shall avail ourselves of some of his remarks, as they tend to confirm the opinion which we had formed ourselves. M. D. very justly observes, that the facts and reasonings adduced by M. Louis, do not warrant us in deducing any exact conclusions as to the influence of bloodletting, in general, on the course, duration, or issue of pneumonia; because it is very evident that the only correct way to obtain such a knowledge, is to compare a certain number of cases, treated altogether without bleeding, with the same number of equally severe cases, treated with it. Now, in all M. Louis' cases, more or less blood had been withdrawn at some period of the disease. The value of M. Louis' facts appears to consist chiefly in affording data, to prove the relative advantages of an early and of a tardy recourse to the remedy; and certainly we had thought that it needed not a physician of M. Louis' talents, nor so minutely recorded tables of cases as he has published, to prove the infinite superiority of the one method of treatment over the other; but we find that we have been mistaken, at least if the results of these tables are to be received as guides of our judgment. It appears that, out of 41 cases, in which bleeding had been employed during the first four days of the disease, 18 died; and that out of 36 other cases, in which the bleeding had been delayed beyond the fourth day, only nine were fatal. Were we, therefore, to trust exclusively to the numerical method of investigation, without due regard to the circumstances

of each case, we should come to the very unexpected conclusion, that it is better to delay bleeding, for some time after the mischief has been fairly established! "Il y a des gens, auxquels des colonnes de chiffres en imposent! Toute la science se réduit, pour eux, à l'addition et à la soustraction."

Without disparaging the exactness of the arithmetical mode of enquiry, we quite agree with the truth of the axiom—"perpendendæ, magis quam numerandæ sunt observationes." Certain departments of medical science are much more likely than others to be improved and advanced, by minutely-recorded registers of facts. Thus the morbid anatomy, the etiology, and what may be called the statistics of diseases, cannot be satisfactorily examined in any other method. If we wish to know on what lesions the symptoms of a disease depend, or, at least, what lesions are generally found on dissection, after the existence of a certain train of symptoms, it is obvious that we cannot hope to arrive at any accurate knowledge unless we make a multitude of observations, and have these carefully arranged. No short series of examinations can ever suffice—it may give the hint and suggest the idea, but beyond this it cannot go; and, in order to arrive at any exact conclusions, we must have series after series, each faithfully recorded and numerically arranged. The signal advantages of such a system of pathological enquiry have been beautifully illustrated by Louis, in his researches on phthisis. His shrewd and unbiassed mind soon perceived that, in describing the morbid anatomy of a disease, it was not sufficient, nay, it was not correct merely to detail, however exactly, every lesion and abnormal appearance which was revealed on the dissection of fatal cases; and for this very obvious reason—that some of these lesions, and some of these abnormal phenomena, were strictly and essentially the results of the disease in question, and that others were merely co-existent with, and not necessarily dependent upon it. For example, he assures us that, whenever he discovered any genuine tuberculous matter in the

spleen, in the kidneys, in the intestines, mesenteric glands, or, indeed, in any part of the body, not including the lungs, he invariably found the same morbid deposit in these last-named viscera; intimating thereby some necessary connexion between tubercles in the lungs, and tubercles any where else.

According to his researches, also, we have been taught more correct doctrines respecting the disease which has been styled laryngeal phthisis. Until very recently, it was the generally admitted opinion, that all the symptoms of genuine pulmonary consumption might be induced by ulcerous diseases of the larynx and trachea, while the lungs remained perfectly sound. But this opinion has been proved to be erroneous; and it is now no longer denied that, in every case of tubercular disease of the air-passages, there is a co-existent tubercular affection of the lungs themselves. Such a fact could have been proved only by comparing a host of exact observations.

As illustrative examples of a similar connexion, and of the mutual dependence of diseased actions in different parts of the body at the same time, we may allude to the fatty disorganization of the liver, and the enlarged and ulcerated state of the mucous glands of the intestines, in phthisical cases. These lesions are almost exclusively found in patients who have died of tubercular disease; and they may, therefore, be considered as the direct and legitimate effects of such a state. But there are other lesions, as frequently met with in phthisical cases as any of the lesions which we have specified, and which nevertheless, cannot be considered as pathognomonic, or specially appertaining to and induced by phthisis: we may mention, as examples, the effusion of serous fluid into the pleuræ, adhesions of these membranes, portions of hepatized lung, &c. which are so common appearances after phthisis. But then they are almost as common after other chronic and protracted illnesses as after phthisis.

The division, therefore, of the post-mortem appearances, found after a long-continued disease, into such as are spe-

cial to, and characteristic of it, and into such as are common to it along with other chronic diseases, is of primary importance in the study of pathological science. Hitherto it has been far too frequently overlooked; and the errors which have in consequence arisen, in endeavouring to search out the physical causes of disease, have been most perplexingly numerous. Typhus fever furnishes an apt illustration of this remark. How various and conflicting have been the opinions as to the primary and essential morbid condition, or, as it used to be called, "proximate cause," of this very common disease; and how unstable and unsatisfactory, in consequence, has been the treatment of it! The humoral doctrine of Boerhaave, the nervous doctrine of Cullen, the cerebral doctrine of Clutterbuck, the gastro-enteric doctrine of Broussais, and, lastly, the dothinenteric doctrine of Bretonneau, Bouillaud, and others of the French school, all these doctrines have arisen from the faulty method of investigating the subject of enquiry. The authors have taken too partial and exclusive a view of the disease—they have directed their attention to one set of symptoms, or to one set of post-mortem appearances, to the omission of other symptoms, and of other appearances; their facts or data have been too insulated and disjointed, and their conclusions have been, in consequence, too contracted, and often erroneous. We have been induced to extend these remarks, as the subject is not only of great scientific interest, but of direct practical importance. Does not the therapeutic history of typhus fever shew how fickle the art of medicine too frequently has been?

The antiseptics and antacids recommended by one school, the antispasmodics and diaphoretics by another, the cordials and stimulants by a third, the application of leeches to the head, epigastrium, hypogastrium, &c. by a fourth class of physicians;—all this fluctuating uncertainty of practice ought surely to lead a philosophical mind, "nullius in verba magistri jurare," but to study the book of Nature for itself, with no fond theory to establish, and no rival doc-

trine to assail. The exactness of the numerical method of enquiry is admirably calculated to correct this great evil of medical pursuits. If, for example, the physicians whom we have mentioned by name, as the authors or chief advocates of certain doctrines, had prepared registers, tabularly arranged, of a multitude of typhus cases; these registers presenting a succinct account of the mode of invasion, the progress, the duration and issue of each, with minute details of every abnormal appearance found on the dissection of those who had died, we should, long ere now, have arrived at much more accurate conclusions as to the seat, and a much more rational method of curing the disease, than has usually prevailed.

In typhus, as in every other disease, we should interrogate, not one only, but all the functions of the living body; and examine, not one only, but all the viscera and symptoms of the body after death. No physician has deserved better of medical science, in this respect, than M. Louis; but, while we cheerfully admit his claims to distinguished eminence, we must not disguise from our readers, that we are not prepared to follow him in some of his doctrines as to the treatment of diseases. The numerical method of inquiry, which he has endeavoured to introduce into the treatment of typhus fever, has satisfied us, that even the most cautious and scrupulous inquirer is apt to be misled into strange admissions, when he attempts to apply the rules and axioms of an exact science, like arithmetic, to the explanation of the phenomena of an ever varying object, like that of the human body, especially when the equipoise of its functions is disturbed by disease. We have already seen that one of the results of his tables is the unexpected announcement, that a larger proportion of the patients who had been bled before the fourth day, died of the disease, than of those in whom bleeding had not been practised until after that period. But, as there must be either some positive mistake here, or there were certain influencing circumstances in the one set of cases which did not operate in the other set, we

may pass this part of our subject over; and shall now advert, for a moment, to the view which the tables of M. Louis present to us, of the relative duration of the disease in different sets of cases, according to the treatment which had been employed. It may be useful to premise, that some physicians are too apt to be guided in their practice by the alleged superior dispatch of one mode of treatment over another, forgetting the old adage, "*sat cito, sat bene.*" Let it be remembered that, in the treatment of a disease like pneumonia, it matters but little whether the patient be "on the doctor's list" one or two days, more less. Our object is to get him well; speedily well, if possible, but at all events well. In our attempts to make a speedy cure of a disease, how often are we not only frustrated, but even punished with an unusual delay. Some years ago, a proposal was made to treat gonorrhœa, from the commencement, with injecting a strong solution of nitrate of silver into the urethra; but it was soon found that, except in a few cases, in which the discharge was certainly very speedily arrested, the medium duration of the caustic treatment was considerably greater than when merely demulcent drinks and rest had been employed. Equally, and much more seriously true is the remark, in respect to the treatment of typhus fever. Indeed we should be almost inclined to say, that all attempts at a very speedy, or "*coup-de-main*" sort of treatment ought to be deprecated, in fevers of every kind. It would seem that they have an appointed course to run, and that any effort to arrest this suddenly only accelerates the mischief, or renders it more deeply and more immoveably seated, and therefore, more difficult of removal. Let it not be supposed that we are unfriendly to bold and decisive therapeutic measures—far from it: all that we contend for is, that it is of infinitely greater importance, and it is infinitely more creditable to a physician, to save 20 patients in any manner, than only 19, although the cure, in each of these 19 cases was surprisingly rapid. The great art of an accomplished physician is, on the

whole, rather to *lead* a disease through its stages to a favourable issue, than to attempt to strangle it at once. The latter attempt may indeed sometimes succeed to admiration; but, if it does not, the very attempt must inevitably entail mischief on the patient.

From these general and discursive remarks, let us now attend to some of the details of M. Louis' memoir, respecting the treatment of pneumonia by large doses of the tartrate of antimony. We are informed that in sixteen cases, so treated, the duration of the disease, was longer by three days than in those, where the medicine had not been used; but that the mortality did not exceed the proportion of one in six patients. The latter part of this statement is much more to the purpose than the former part. We should require to know the exact nature, and the special particularities of each case, before we could safely draw any satisfactory conclusion that the duration of pneumonia, when treated with the tartrate, is usually longer, than when it had not been used. But if we object to M. Louis' opinion on this score, we have much stronger objections to the following doctrine, respecting the therapeutic effects of blood-letting, viz.: "que la saignée n'a que peu d'influence sur la marche de cette maladie, et que son influence n'est pas plus marquée dans ceux où elle est copieuse, et répétée, que dans ceux où elle est unique."

Now the very data of M. Louis' own memoir do not warrant the conclusion, that venæsection, practised to a large amount and frequently repeated, has but little influence on the progress of pneumonia; for in the majority of his cases, neither was the quantity of blood drawn very large, nor was the operation frequently repeated. All that can be fairly deduced from M. Louis' researches, is that small bleedings have not had "des effets très-marqués sur la marche et les symptômes de cette maladie." As to the effects of very copious bleedings, especially of such bleedings frequently repeated during the first days of pneumonic attack, the practice of M. Louis does not entitle him to judge. The clinique of Professor Bouillaud, how-

ever, can bear undisputed evidence to the efficacy of such vigorous treatment.

M. Donné refers to some reports of cases which he saw treated in the Hôpital de la Charité during the years 1832 and 3, on which he founds this judgment. Out of 23 cases, only one proved fatal. He adds "je dois avouer que l'énergie avec laquelle M. Bouillaud a traité ces maladies, m'a plus d'une fois ébranlé, et il n'a fallu rien moins que le succès éclatant qu'il a obtenu pour me rassurer, et me convaincre." The extent of the venæsections, and the shortness of the intervals between each operation, was assuredly the cause of this great success. When the case was at all severe, M. Bouillaud's usual practice is to bleed to the amount of 20, or 24 ozs. say, in the morning; to repeat the operation in the evening, and during the interval to order 15, or 20 leeches to be applied over the seat of the pain; the bleeding from the leech-bites to be generally encouraged by the application of cupping-glasses over them. On the following morning another similar bleeding from the arm was usually practised; again repeated in the evening, and the leeches were re-applied. On the third, fourth, and fifth days, one venesection was very generally practised. On the whole, the average number of bleedings was from 4 to 7, each being copious; and the number of leeches applied from 60 to 80; and all this, in the course of the first five or six days.—*Archives Générales*.

INTERESTING CASE OF CHRONIC PLEURISY, ACCOMPANIED WITH FISTULOUS OPENINGS IN THE LEFT LUNG, PNEUMOTHORAX, AND LOOSE OSSEOUS CONNEXIONS WITHIN THE PLEURA.

Although chronic pleurisy is most generally the consequence of the acute form of the disease, yet sometimes it is primary, and then its approach is often so obscurely marked, that it may have existed for a length of time, and extensive effusion may have taken place into the pleural cavity, before the patient is at all aware of any mischief. His gene-

ral health may not have suffered so much, as to prevent him from continuing his ordinary avocations; the pain may be very trifling, or it may be altogether absent; the cough is usually irregular and never very troublesome at first, and the breathing is often free from any marked inconvenience. Chronic pleurisy affects sometimes the whole of one side, at other times it is limited to a small extent. Very rarely both pleuræ are affected at the same time. The symptoms are much influenced by the extent of the disease. When it has existed for some time, and a large extent of pleural surface has been affected, the auscultatory signs are usually very expressive, and easily recognised. The sound on percussion over the whole, or the greater part of one side is dull, and the respiratory murmur and resonance of the voice are very feeble and indistinct. The patient not unfrequently complains of a sense of weight on the affected side, and when the effusion is large, or has been of long continuance, this side may be obviously fuller and more expanded than the other one. In some cases the intercostal spaces are considerably more separated from each other than in a state of health, and not unfrequently they are very manifestly more projecting. Some physicians have asserted that they could discover the presence of fluid by tapping the chest with the fingers, as we do the belly in ascites; but this must be very rarely the case, as Chomel states that he has often tried the plan, but has never succeeded in the attempt. The state of the respiration should be always diligently examined. When the patient is perfectly quiet, there is often no disturbance of this function; but any exertion, as quick walking, loud talking, coughing, &c. brings on a sense of distressing tightness and oppression, from which he does not recover for some time. Firm pressure on the abdomen, or on the affected side of the chest will produce the same result. The cough is generally more or less irregular, both in its frequency and in its severity; the expectoration is in most cases tenacious and of a mucous character. The position of the patient in bed ought never

to be neglected:—he generally lies on the affected side, on the back, or in an intermediate posture.

The most obvious constitutional symptoms are general pallor of the surface, a certain puffy, or bloated appearance of the features, a sense of coldness and numbness of the extremities, an increasing diminution of the muscular and mental energies, and a looseness and flaccidity of the fleshy parts.

In primary chronic pleuritis, there is, as we have already mentioned, often an entire absence of any febrile movement; but in that variety of the disease, which succeeds to an attack of the acute form, there is generally a tendency to evening fever, followed by partial sweats during the night. The severity of the feverish attacks is very probably influenced, at least to a certain degree, by the nature of the effused fluid. When this is entirely of a serous character, as is usually the case in primary chronic pleuritis, there is little tendency to fever; but when it is puriform, there is always more or less of an irregular hectic pyrexia.

The duration of chronic pleurisy varies from two months to one or two years. During its continuance there are very usually occasional remissions and exacerbations of the symptoms, before the final tendency, whether favourable or not, is fairly established. It is rather by the state of the general health, than by the presence of any local symptoms, that our prognosis ought to be guided. When the decay of the strength is gradual and progressive, when the breathing becomes more and more distressed, when the pulse becomes more and more quickened and irregular, and especially if any tendency to anasarca, or to diarrhœa supervenes at the same time, our hopes of an ultimate cure can be very feeble indeed. On the other hand, when the general health improves, and the cough and dyspnœa become less and less troublesome, we may confidently expect that the effused fluid will become gradually absorbed. The progress of the absorption may often be ascertained by the gradual diminution of the dimensions of the affected side, which then

becomes flatter and flatter, and even sometimes is visibly drawn in. These changes are most conspicuous in old cases, where the effusion has been large, and the compression of the lung has been so long continued that it remains contracted and shrivelled. Absorption is not however the only method, which Nature employs to remove the effused fluid. In some cases, especially in those, where the fluid is of a purulent character, the fluid may work itself an exit, either through the pulmonary pleura, and the substance of the lungs into some of the bronchi, from which it is rejected by expectoration, or through the thoracic parietes outwardly. In the first of these cases, a patient affected with chronic pleuritis, who may have been suffering for several weeks, or months with a troublesome dry cough and scanty expectoration may all on a sudden be seized with a profuse expectoration, or we may rather say, a vomiting of purulent matter which continues more or less abundantly from the date of the seizure.

The phenomena of the second case cannot be mistaken. One or more fistulous openings at some part of the thorax make their appearance, and from these a purulent, or semi-purulent discharge exudes, especially during any effort of expiration, as for example, immediately after coughing, sneezing, or the like. The introduction of a probe will render the diagnosis more sure: if it can be passed to a considerable depth, and its point be then freely moveable, it is reasonable to believe that it has entered the pleural cavity. Chomel has witnessed one or two cases in which both of these lesions took place nearly at the same time; so that the escape of the effused fluid, partly by expectoration and partly by external draining, occurred almost simultaneously. M. Lermnier in his Clinique, has reported an interesting example of this double lesion.

Of the two lesions, the internal one, or that of ulceration of the pulmonary pleura and parenchyma, is of more rare occurrence, than the external one. Were we to trust merely to the reports of patients we might judge otherwise;

for it is by no means unfrequent to hear patients talk of their having vomited large quantities of pure pus, on the decline of a fluxion of the chest. The physician must be on his guard not to be misled by such statements. Unless the supervention of a profuse expectoration of pus has been quite sudden, and as it were instantaneous, the mere circumstance of the sputa in any case being puriform and in large quantities, is not sufficient to warrant the suspicion of a pulmonary fistula having taken place. Chronic bronchitis, with dilatation of the air-tubes, is often accompanied with a copious puriform expectoration. The prognosis in either case must be on the whole very unfavorable. Recovery is not impossible; but it is certainly very uncommon.

In some cases, the patient has been immediately suffocated by the rapid escape of the fluid into the bronchi. The chances of recovery are certainly much diminished, when the quantity of the discharge, whether it finds an outlet internally by the bronchi, or externally through the integuments, is very profuse. We have not yet alluded to the auscultatory signs of the lesions which we have been considering.

Our readers will find some very useful remarks on this branch of symptomatology in our Review of Louis on Phthisis in the present Number. The sudden occurrence of percussion eliciting an unusually resonant sound in a part, where previously the sound was quite dull, while the respiratory murmur continues faint, or is altogether inaudible, the amphoric blowing, and the metallic tinkling sound, are, when present, very satisfactory evidences of the nature of the lesion which has taken place. It is however necessary to know, that in some cases of perforation of the pleura, especially where the chronic pleuritis has been very protracted, and where the adhesions are very extensive, the escape of air into the pleural cavity may be rendered impossible, and the auscultatory symptoms must necessarily be absent, or at least very indistinct. The prognosis in chronic pleuritis, is on the whole decidedly unfavorable. Of eleven cases treated

by M. Chomel in the wards of La Charité, five proved fatal. Even when the absorption of the fluid is complete, the patient seldom recovers his health and strength entirely. He remains subject to dyspnœa, occasional cough, &c. The prognosis is more unfavourable in consecutive, than in primary and idiopathic chronic pleurisy; the effused fluid in the former case being usually of a more puriform character, and the false membranes being thickened and frequently also more extensively deposited.

The morbid changes which these false membranes may undergo, are among the most interesting themes of enquiry to the scientific pathologist. Soon after their deposition, they become provided with blood-vessels, acquire a particular organization, and may become subject to diseases, like other organised structures; for example, to the effusion of a serosity, between their layers; to the deposition of new lymph upon their surfaces; to hæmorrhages, as appears from clots of blood having been found in their substance; to gangrene, according to M. Laennec; to tuberculous deposition, not a very uncommon phenomenon; and lastly to the production of fibro-cartilaginous, and osseous concretions.

It is unnecessary to enlarge upon the treatment of chronic pleurisy, as no good physician, after once ascertaining its existence, can hesitate about the remedies he ought to employ. When the effusion has taken place, the frequent application of blisters over the affected side, and the internal use of mild mercurials, with laxatives and diuretics, are the means which have been found most generally beneficial. But we again repeat that to form a correct diagnosis is infinitely more difficult, and infinitely more important, than the mere knowledge of the most approved remedies. Occasional pain, cough, dyspnœa increased on any bodily exertion, sense of weight and oppression on one side, inability to lie comfortably on the sound side, frequent pulse, rapid breathing; these symptoms, when associated with dullness of sound on percussion, feebleness or total absence of the respiratory murmur and

of the resonance of voice, or in other cases the ægophonic sound, must suggest the existence of pleuritic effusion. When perforation of the substance of the lung is co-existent with effusion, the peculiar "tintement métallique," and the amphoric blowing usually become perceptible. We shall now detail two interesting cases, which illustrate many of the preceding remarks.

CASE I.—*Chronic Pleurisy, with Pseudo-thorax, from a fistulous opening in the lung.* A man, 66 years of age, was received into the Bicetre on the 12th of August, 1834. Four years previously he had sustained a violent blow on the left and middle parts of the chest. An attack of pneumonia was the consequence; and according to the patient's report, he some time afterwards expectorated a large quantity of pus. From that period, the left side has sensibly contracted, and the spinal column, towards the upper dorsal part, has been gradually inclining to the right side. When he was first admitted into the Infirmary, his chief complaints were extreme weakness, and pains in the loins and lower extremities. But as the expectoration was truly purulent, and as there was regularly an evening febrile attack, and also profuse perspiration during the night, it was suspected that serous inward mischief was existing somewhere.

The chest was therefore attentively examined with the stethoscope; and unequivocal signs of the presence of vomica in the summit of the left lung were readily discovered. Pectoriloquy and cavernous respiration were very audible. Percussion over the same part elicited a more sonorous sound than is heard in health. The posterior and inferior parts of the chest emitted a dull sound on percussion, and there no respiratory murmur could be heard. The absence of ægophony, and more especially the persistence of the dull sound on percussion, and of the defective respiratory murmur, over a space of uniformly the same limited extent, argued against the supposition of there being any effusion into the pleural cavity. The patient died during the third week after

his admission into the hospital. The symptoms had not undergone any decided change, or very marked aggravation, but the evening fever and the night-sweats rapidly exhausted all the powers of life.

Dissection. The right side of the thorax was observed to be much more expanded than the left side; the ribs were unusually apart from each other. The left side was considerably contracted; the fifth, sixth, and seventh ribs of this side were almost in contact with each other. On examining the lungs, the upper lobe of the right one was found to contain numerous crude tubercles. In the upper lobe of the left lung, the tubercles were more numerous, and there were also two small vomicæ, which were empty, and lined with a mucous membrane. These vomicæ were separated from the pleura by a layer of sound pulmonary substance, a circumstance which must have prevented any communication between the excavations and the pleural cavity. The lower two-thirds of the left lung were pushed up and compressed by a large quantity of puriform fluid, contained within the pleural bag. The external or costal wall was lined with a false membrane, several lines in thickness, of a yellowish colour, and of a firm semi-cartilaginous consistence. Two inches below the summit of the left lung, there were discovered five small apertures, penetrating through the pulmonary pleura at this part, and leading directly into some of the bronchial divisions, but not into either of the vomicæ. These apertures were large enough to admit readily a crow-quill; and the length of the passages leading from thence into the adjoining bronchi was from a third to half an inch. The purulent matter contained in the pleural bag was "lié, consistant, homogène, peu odorant, d'une couleur blanche grisâtre." On comparing it with the expectorated sputa, the two were found to be quite alike. Lying quite loose in this purulent fluid, were found upwards of a dozen semi-osseous concretions, of various dimensions and forms. The largest were of the size of a 40-sous piece; they were uneven

and rough on their surfaces and on their edges; and here and there they exhibited an appearance, as if they had been sprinkled with a cretaceous powder. In a few of them were observed small openings, very like the orifices for the passage of the nutritious vessels of the bones. Nothing unusual was found in any of the other viscera.

Remarks. It becomes a question of interesting consideration, how long the ulcerated openings in the left lung, and the consequent communication between the pleural cavity and the vomicæ had existed. Had they been present ever since the purulent expectoration had commenced? The case, in some respects, resembles some which have been published by Bayle, in his treatise on phthisis, in which he points out the very great resemblance between some examples of chronic pleuritis, and of genuine pulmonary consumption. The diagnostic mistake which was made in the preceding case was certainly very excusable, seeing that there was a co-existent tubercular disease of the lungs. The absence of ægophonic sound, and of any sound which might indicate that the level of the contained fluid changed with the change of position, was attributable to the circumstance of the effusion being confined, and, as it were, encysted within narrow limits, by the adjoining adhesions of the opposing pleuræ. This case proves also that the metallic tinkling sound is not a uniform symptom of a fistulous opening from the lungs into the cavity of the pleura, complicated with pleural effusion. Whether this was owing to the circumstance of no fluid dripping from the apertures, into the effused fluid in the pleural bag, or of the effused fluid reaching nearly to the level of the apertures—or, lastly, of the apertures being (according to the explanation of the metallic tinkling recently proposed by M. Beau) not beneath the surface of the contained fluid, we are not prepared to say.

The theory of M. Beau is highly ingenious:—He supposes that the "tintement métallique," or, as he prefers calling it, the "tintement bullaire," is at-

tributable to the escape and passage of air-bubbles from the fistulous opening, through the effused fluid, these bubbles bursting when they reach the surface of the fluid. The bursting of the air-bubbles being, according to him, the cause of this peculiar sound, it is obvious that, if Beau's explanation be correct, this very peculiar sound cannot be present, unless the ulcerated opening of the lung be situated under the level of the effused fluid.

M. Bricheteau, in whose service, at the Hospital of Necker, M. Beau acted as clinical clerk, seems inclined to adopt his pupil's view's. In his late work, "*Clinique Medicale*," he states that he has frequently repeated M. Beau's experiment (this consisted in blowing gently through a small tube, introduced into a flask half filled with a fluid; the air-bubbles, as they rose to the surface and burst, "*simulait, à l'oreille de l'observateur attentif, le tintement métallique*") and testifies that "*toujours le bruit, obtenu par l'explosion de la bulle d'air, nous a paru conforme à celui du tintement métallique.*"

It is worthy of notice, that the late M. Dance had anticipated M. Beau, in the explanation given of this curious auscultatory sign—*vide* the late edition of the *Dictionnaire de Médecine*.

The circumstance of these two observing physicians having, quite unknown to each other, arrived at the same conclusion, is well calculated to confirm its probable accuracy.

The case now recorded confirms the accuracy of the remark, that pneumothorax is of much more frequent occurrence on the left, than on the right side of the thorax. The cases of M. Louis (reported in the review of his work on phthisis, in the present Number) leap to the same result; and from a table of forty-nine cases, the histories of which had been collected by Dr. Renaud in 1830, it appears that, in not fewer than thirty-two of them, the disease existed on the left side.

With regard to the loose and undetached osseous concretions found in the purulent effusion, it is difficult to propose any satisfactory explanation of their origin. It is well known to

every pathologist, that partial ossification of portions of the pleura is not of very rare occurrence; but few, if any cases of osseous concretions lying loose within the pleura, and unconnected with this membrane, are on record: occasionally they have been discovered in other serous cavities. In the art. "*Cartilage accidentale*," of the *Dictionnaire des Sciences Médicales*, an article which was written by M. Laennec, it is stated that some anatomists have met with osseous concretions "*dans les cavités memes de l'arachnoïde (the cerebral ventricles ?) where they floated quite loose and unadherent.*"

Cartilaginous, and even osseous concretions have been not unfrequently found in the sac of the tunica vaginalis testis. The chemical examination of the concretions which M. Prus found within the pleural cavity, was performed by M. Guibourt, an expert analyst. The following is the report of his examination.

The substance of the concretions was of a yellowish-white colour slightly translucent, irregular, tuberculated, presenting, in its interior, numerous small cavities, and consisting of an apparently fibrous structure. When pulverized, it emitted an extremely offensive odour, like that of intestinal fat. On exposure to heat, it became black, and burned imperfectly, without producing any flame, or becoming at all melted; the smell was similar to that emitted from mucus, when heated. Æther dissolved it very partially; and when the solution was evaporated, a fatty, and somewhat saponaceous residue was deposited. Cold water had very little effect upon the substance; a small quantity of saline matter only, chiefly muriate and sulphate of lime, being taken up. Boiling water extracted a small portion of a mucus-like matter. The quantity removed by these agents, and successively one after the other, was very minute; 2·21 grammes (each gramme consisted of nearly 15½ grains) was only reduced to 2·065. This residue, being then exposed to a white heat, in a platinum crucible, it lost exactly one-fourth of its weight, and there remained a white product, which effervesced feebly

on the addition of muriatic acid. The result of the analysis may be stated, as follows:—

Phosphate of lime,	1.085	—	49.1
Carbonate of lime,	0.465	—	21.1
Insoluble mucus . .	0.615	—	27.8
Fatty matter . . .	0.040	—	1.8
Soluble salts . . .	0.005	—	0.2
	<hr/>	<hr/>	
	2.210		100.0

Berzelius' analysis of human bone is subjoined, in order that we may be able to form a comparison between it and the concretions found within the pleural sac.

Gelatine	32.17
Vascular tissue . . .	1.13
Phosphate of lime . .	53.04
Carbonate of lime . .	11.30
Carbonate of magnesia,	1.16
Muriate of soda . . .	1.20
	<hr/>
	100.00

The chief difference in the composition of the concretions from that of bone, appears to consist in the substitution of the insoluble mucus in the place of the gelatine, and in the double proportion of the carbonate of lime.

The composition of the pleural concretion agrees very nearly with that of many accidental ossifications; for these latter are almost always found to contain a quantity of insoluble mucus, and little or no true gelatine.—*Révue Médicale*.

CASE 2.—Chronic Pleurisy—Empyema bursting outwardly, through the Diaphragm and the Abdominal Parietes.

Nicholas Constanza, 40 years of age, had, for the preceding 20 years, suffered repeated attacks of ague, which had left behind an enlarged and indurated state of the spleen. Fifteen months before his death, he began to experience sharp lancing pains in the lumbar region of either side, which baffled all attempts at relief. In April, 1834, the pain in the region of the spleen increased in severity, and a considerable fullness was observed in this part. The symptoms of hectic fever coming on, he

was admitted into the Hospital of Incurables, at Florence. As the swelling was supposed to depend upon a deep-seated suppuration, poultices were applied for some weeks. At length it pointed so distinctly, that the surgeon was induced to open it with the lancet. A large quantity of dark-coloured, sanious pus was discharged from the wound; but no sooner had most of the pus been evacuated, than the patient suddenly lost his voice, and his breathing became greatly distressed. The hectic symptoms rapidly increased in severity after the operation; the abdomen became swollen, and excessively painful, especially towards the right iliac region, the urine was hot and burning, the respiration hurried, the tongue red and parched, and, in short, all the symptoms of an acute peritonitis rapidly developed themselves, and death speedily followed.

Dissection. The spleen was found to be perfectly normal in structure; but it was situated rather lower in the abdomen than usual. The abscess, which had been opened, was found to communicate, by a perforation through the diaphragm, with the left pleural sac, where a vast collection of purulent matter, similar to what had escaped outwardly by the wound, existed. The left lung was extremely shrivelled, and forced up against the posterior mediastinum. In the purulent matter, numerous coagula of blood, such as we find in aneurismatic sacs, were floating about. The costal pleura was greatly thickened and indurated, and this, as well as the pulmonary pleura, was of a dark colour. The diaphragmatic pleura also was much thickened, and was of the same colour. The right lung, the heart, and its large blood vessels were normal. The state of the abdominal viscera is not described.

The preceding case is curious, as shewing that an abscess, formed in the left side of the chest, may occasion but little pain or swelling in the part immediately affected; and that the chief seat of the local symptoms may be in some portion of the abdominal parietes.

It is interesting, also, as a proof of the beautiful provision made by Nature

against internal effusion ; for while the ulcerative absorption of the diaphragm was going on, this muscle had contracted an adhesion to the walls of the abdomen, and had thus prevented the escape of the purulent contents of the pleural cavity into the abdomen, which otherwise must have been inevitable.—*Filiatre Sebezio, 1834.*

CURE (?) OF A VOMICA, OR ABSCESS IN THE LUNGS, BY BLEEDING.

The following case is reported in the *Journal Hebdomadaire*, as having occurred recently in the wards of La Charité, under the care of M. Bouillaud, who is generally acknowledged to be a most accomplished stethoscopist.

A young man, 22 years of age, was admitted into the hospital, on the 17th of last September. He had been ill for upwards of two months; his illness commencing with the symptoms of a common cold, and characterised in its progress by a harassing cough, which was at first dry, and then, accompanied with expectoration of a fetid mucopurulent matter occasionally streaked with blood, by general weakness and emaciation, and by most of the symptoms of an incipient hectic.

On the 30th of July he entered into the Hôtel Dieu, in consequence of a troublesome diarrhœa. He remained in that hospital for six weeks, during which time the pectoral symptoms had not become at all mitigated. When admitted into La Charité he was pale and languid; the cough was frequent; the sputa filthy, of an offensive smell, and amounting in quantity to twice the contents of a "crachoir" in the course of 24 hours. The summit of the right side of the chest generally, sounded dull on percussion. On examining this region with the ear, a cavernous blowing, alternating with a gurgling sound, might be distinctly heard; and when percussion was employed directly over the part where these sounds were heard, a bruit like that caused by striking a cracked vessel was elicited. On the left side of the chest, the respiratory

murmur was puerile, and the resonance from percussion normal. M. Bouillaud ordered the patient to be bled to sixteen ounces, to lose the same quantity of blood by cupping between the shoulders, and to live on a mild diet of broth and vegetables. Considerable relief to the cough, and diminution of the quantity of the sputa followed the bleedings: the engorgement however of the summit of the right lung still continued. After the lapse of a fortnight, another venæsection to the same amount was practised. On the day following, the dull sound on percussion of the summit of the affected lung was found to be greatly diminished; and it was with the view of dissipating the engorgement altogether, that, eight days afterwards, the cupping glasses were ordered to be applied immediately over the diseased part. From the date of this last bleeding, the patient experienced the most decided amendment; for, in the course of two weeks, the cough and expectoration had entirely ceased. The sound now elicited by percussion at the summit of the right lung, was clear and resonant. The cracked-vessel sound was still perceptible lower down on the same side, but it was less extended than it was at the commencement of the treatment. The patient speedily began to recover his strength and flesh, and he gradually advanced to a complete recovery.*

Remarks. "It is not after the manner," says the French reporter, "of the ancients, who trusted to the rational symptoms only in their diagnosis of diseases, that we announce the above successful treatment of a case of genuine pulmonary phthisis. We recognized its existence by indisputable physical signs; signs which are at once positive, and the knowledge of which is not the privilege of any one physician or sect of physicians in particular, but is easily and satisfactorily within the reach of

* The bruit of the "pot-felée," a sign of an old cavernous excavation, remains, we are told, to the present day, although all the other symptoms of such a lesion have disappeared.

all the world! Moreover it was not one person only who proved the true nature of the disease in our patient: it (the disease) was 'reconnue, mesurée, calculée, et notée,' as very curious by a numerous auditory of pupils and physicians, foreign as well as domestic. The case, however remarkable, is not cited as rare or very singular; but with the hope of convincing the profession of the unequivocally curative effects of the treatment which was adopted. The general amendment which followed each bleeding was too obvious to escape the notice of any one present, and in short 'émission sanguine est la seule médication qui peut être dirigée directement contre la nature de cette affection.' What! will any one in the present day maintain that the act of tuberculation is not analogous to that of inflammation? Let them scrupulously, and with minds free from prejudice, enquire of patients who are labouring under tubercular disease of the lungs, and they will find, that almost every one of them has, at some period or another, had fluxions or neglected colds, and has been more or less exposed to the influence of atmospheric changes. If it is alleged, as an argument against the inflammatory origin of pulmonary tubercles, that they are frequently coexistent in several tissues, or organs of the body, may we not reply, that this feature of dissemination is true of other diseases, which are undeniably genuine phlegmasias? Is not pleurisy often coexistent with pericarditis, peritonitis, or with inflammatory rheumatism? Does not erysipelas very often develop itself in several parts of the body successively? The mere circumstance, therefore, of more than one or two organs being simultaneously affected with tubercles, (and be it remembered, this complication is very far from being of constant occurrence,) cannot therefore be fairly adduced to disprove the phlogistic origin of tubercles. It is usually in old protracted cases that we find several organs similarly affected at the same time; and all physicians are aware that the duration of diseases has a great influence on their type and character (forme.) When an acute cerebritis ter-

minates in the formation of an abscess, small although this may be, how complex is the series of symptoms which precede death; whereas, when such an abscess is formed very slowly, we know that life may be protracted for years. Let us therefore never forget that it is irrational to call every thing, which we cannot well explain, impossible. *Plura enim in morbis fiunt, quæ observare tantum licet, minime vero intelligi.*"—*Lancette Française.*

We have described the details of the preceding report at much greater length than it merits, either from the practical importance of the case which is described, or from the reflections to which it has given rise in the mind of the narrator. Our chief motive has been to exhibit to such of our readers as are not in the habit of perusing the continental medical literature, a specimen, by no means of unusual occurrence, of the spirit which too often pervades the reports and the reasonings of many of the French physicians.

The case is announced to be one of cure of genuine tubercular phthisis, in the last stage of the disease, when the tubercles have softened, and vomicæ have been formed in consequence. Now we (*Rev.*) have strong doubts whether the diagnosis was correct. Certainly the details of the report do not warrant the cautious critic to pronounce the case to be one of genuine phthisis; and it must be from these details only, that we or any other readers can deduce our opinions.

There is no mention made of the constitution or habit of body of the patient: we are not told whether the phthisical tendency was hereditary or accidental; many of the most pathognomonic "rational" symptoms of confirmed pulmonary consumption seem to have been altogether absent; and even some of the signs deduced from auscultatory examination, bronchophony, and pectoriloquy for example, are not even alluded to in the report. The signs, the existence of which is adduced as sufficient evidence of the malady, are the "cavernous blowing sound, alternating with a gurgling râle heard with the stethoscope, and the dull resonance

elicited by percussion over the summit of the right lung, and the cracked-vessel sound lower down, on the same side of the chest." Now the cavernous and gurgling bruits, although justly of very suspicious import, are by no means of themselves, decisive indications of a purulent excavation. When any of the bronchial tubes become much dilated, and especially when at the same time they lie near to the surface of the chest, the respiratory noise may assume a well marked cavernous character; and the cough and the ordinary mucous rattle may present the bronchial or cavernous character. Stethoscopists are quite aware how extremely difficult it is to draw the distinction between a loud mucous rattle, and the "gargouillement," which has been improperly supposed by some to be inevitably characteristic of the existence of an ulcerous excavation.

With respect to the signs obtained by percussion, we need only state, that the dull resonance indicates indeed an obstructed and hardened state of the subjacent lung, whether this state be produced by the deposition of tubercles, or from any other cause; and that the other sound, the cracked-vessel sound, is acknowledged by Laennec himself to be a very ambiguous sign, and on the whole, one of little value. Such are some of the reasons, which make us hesitate to receive the preceding case, as an example of a genuine phthisical vomica successfully treated. We have not alluded to the treatment, to which the credit of the cure is ascribed. A patient pronounced to have a suppurating cavity in the right lung, and who was pale, weak, and emaciated, and without a single symptom (at least none is mentioned) of an inflammatory affection, is bled and cupped twice, losing in all 64 ounces of blood, and in the course of a few weeks is declared to be cured! Need we make any comments? We lately read the reports of some cases adduced by Sir C. Scudamore, as examples of confirmed phthisis cured by iodine, &c. inhalations! The successful practice of the English, as well as of the French physician, is, we much fear, limited to their own patients.

Their professional brethren somehow or other can never imitate them.

TREATMENT OF PERTUSSIS BY REVULSIVES.

It was Autenrieth, who first distinctly pointed out the great advantages which may be obtained in the treatment of numerous cases of hooping cough, from the use of epispastics. Of these he gave the decided preference to the strong tartar-emetic ointment rubbed on the epigastric region, until a very considerable irritation, and even a painful ulceration are fairly established. M. Corsin employed this practice extensively in an epidemic of the disease, which prevailed in Petersburg several years ago, and he derived, he tells us, most decided benefit from its adoption. He was led however to modify the formula for this ointment recommended by Autenrieth, and to combine some anodyne with the tartar-emetic. Subsequently he has preferred the use of a plaster, which he has found still more effectual than any other application. This plaster is composed of two parts of plaster of hemlock, one of Burgundy pitch plaster, and one of diachylon, to be spread on leather, the surface of the plaster to be then sprinkled with 6, 8, 10, or 12 grains of the antimonial tartrate. It may be applied either to the epigastrium, or between the shoulders. Usually in the course of one, or two days, it induces considerable irritation; the skin is first reddened, and then a free eruption of pustules is brought out. The patient must continue to wear the plaster, until either the cutaneous irritation is so troublesome, that he cannot bear it any longer, or until a decided relief to the hooping cough is obtained.

Case 1. A boy, 8 years of age, of a scrofulous constitution was suffering from a severe attack of inflammatory pertussis, when Dr. C. was called to his assistance. A vigorous antiphlogistic treatment was immediately adopted; and when the active symptoms were once subdued, a plaster made of the in-

redients mentioned above, (2 drachms of empl. conii, and one drachm of Burgundy pitch, and the same quantity of diachylon), and sprinkled with eight grains of tartar-emetic was applied between the shoulders. In 24 hours, it had occasioned a most troublesome itching of the part, which was inflamed, and covered with numerous vesicles; in other 12 hours, it required to be taken off, and the surface was dressed with simple cerate. The distress of the breathing was greatly relieved; the paroxysms of cough were already less frequent and severe, and the child was in every respect much better. On the following fifth day, the plaster was re-applied to the same part; the cutaneous irritation induced was speedily even more considerable than it had been before. Fortunately the relief afforded was proportionally great; for, from this date, a most decided amendment was conspicuous, and in the course of a few weeks, the child was free of every symptom of his troublesome disease. It deserves to be noticed that the internal use of the belladonna had been suspended after the application of the plaster, and that the only medicines exhibited were mild demulcents.

Case 2. The age of this patient was four years. During the preceding Summer she had been affected with an obstinate porriginous eruption on the scalp; and, as this had disappeared, hooping-cough set in and had affected her general health greatly, not only by the frequently repeated and severe paroxysms of coughing, but also by an almost constant irritability of the stomach, so that all food was rejected, as soon as swallowed.

A plaster of hemlock and Burgundy pitch, sprinkled with five grains of the antimonial tartrate, when applied between the shoulders, and a mixture composed of a mild bitter infusion, with the addition of syrup of poppies and of cinchona powder, was ordered to be given in repeated doses during the day. In 24 hours, the plaster was removed, for it had already induced a copious eruption of pustules. The sickness had quite ceased; and the cough was greatly

mitigated. No second application was necessary; and this girl in the course of a week, or two, was pronounced to be well.

Several other cases, all of which evince most satisfactorily the admirably curative effects of the plaster, we have described, are detailed by Dr. Corsin. He is inclined to explain the *modus operandi* of this external treatment, on the principle, that there is in most cases of hooping-cough, a tendency to the occurrence of some cutaneous eruption, whether this tendency be of spontaneous development, or whether it is the result of the retrocession of a pre-existent exanthem. It has indeed been often remarked that the severity of pertussis is frequently much mitigated on the supervention of impetigo, or porri-go.—*Lancette Française.*

M. ANDRAL ON GASTRO-ENTERITIS AND FOLLICULAR-ENTERITIS.

By far the most strongly marked cases of this phlegmasia, in its active or acute form, are those which are induced by poisonous doses of acrid and corrosive substances. Almost immediately after they have been received into the stomach, the patient experiences a burning pain in the epigastrium and at different points of the abdomen; he is tortured with an insufferable thirst; the belly speedily becomes distended, perhaps regularly so, and hence it has often the appearance of being retracted in some places, and inflated at others; retching and vomitings ensue, and then follow purgings, at first of a bilious or serous discharge, and subsequently of a bloody fluid, or even of pure blood. The tongue becomes dry, smooth, red, and chapped on the surface; and in some cases a sanguineous fluid oozes from the fissures. The pulse is usually strong and full, and the skin is hot at first; but the one soon becomes feeble and thready, and the other cold and clammy. After a certain time, the symptoms of local suffering gradually abate, and may then cease altogether, so that a physician being called in at

this stage of the case may be very easily deceived as to its true nature, and be led to suppose that it is one of simple typhoid fever: the constitutional depression, the weak faltering pulse, the hurried breathing, the furred tongue, the tendency to delirium, or coma;—are not these the veriest outward signs of typhus? They are so; but not exclusively or essentially of idiopathic typhus: but rather of a certain stage of gastro-enteritis, whatever be the cause, which may have given rise to this morbid state. Tartra mentions in his thesis several cases of poisoning from nitric acid, in which the gastro-enteric distress was indicated, not by any local symptoms, but only by the presence of adynamic fever. When gastro-enteritis is of spontaneous origin, it is very generally preceded by certain derangements of the system, and more especially of the digestive functions; the appetite is usually much impaired; sometimes, but this is rare, it is more voracious. A capricious state of the appetite is perhaps of the most frequent occurrence; the patient feeling at times the most intolerable hunger, and at other times, an utter want of desire for food. The bowels are very generally either constipated, or they have a tendency to be purged. Head-ache, universal lassitude, and pains in the limbs also are common precursors of gastro-enteritis: and indeed in no disease, is the truth of Hippocrates' maxim more frequently realized; "*lassitudines sponte abortæ morbos denuntiant.*" The seat of pain in this disease varies, as a matter of course, with the exact seat of the inflammation; but it is worthy of notice, that in some cases it is fixed to a point behind the ensiform cartilage, extending perhaps from this point along the tract of the œsophagus to the back of the throat, so that the physician may very naturally suppose that the cardiac end of the stomach was chiefly affected; and yet on dissection no traces of any phlegmasia may be discovered at this part. The peculiar appearances of the tongue in this disease, ought to be well understood by medical men: we shall therefore describe them at some length, premising

that there is usually experienced a sense of distressing heat in the mouth, that the lips are parched, red, chapped, and bleeding, and that the gums are sometimes invested with a thin layer of coagulable lymph.

The sensibility of the tongue is frequently increased, and the patient complains of a burning, or pricking sensation at the point; sometimes it is so distressing, that the mere contact of any substance, however emollient, gives pain. The apex may be drawn out and thus present a more lanceolated shape than usual; and the whole organ may be thickened, so that its movements are more difficult than in health. The colour of the surface of the tongue is variable; sometimes it is not at all changed, whatever be the seat of the phlegmasia: but this negative sign is applicable chiefly to those cases, in which the lower part only of the intestinal canal is affected. In the greater number of instances the colour of the tongue undergoes certain modifications, which are not indeed always commensurate with the violence of the inflammatory action, but which are greatly influenced by the state of the innervation of the whole system. Sometimes it is intensely red, and this redness may be either over the whole extent, or only in patches, or insulated points: at other times, it has rather a brown colour; and more rarely it is singularly pale. The epithelium sometimes separates, and an oozing of blood takes place from the raw surface. In other cases, the surface becomes hard, dry and horny; while in a third set, it is coated with a soft and moist crust of a white or yellowish colour. A cream-like coating is observed in a few examples of the disease.

These various states of the tongue may show themselves at the commencement, or at an advanced stage of the malady; or they may become apparent, only when it is subsiding. It is not to be forgotten that all of them may be present in cases, in which no gastro-enteritis is, or has been present. (From these details, it must be evident, that the appearances of the tongue are very fallacious, as a means of diagnosis.—*Rev.*)

The general or constitutional symptoms of inflammation of the digestive canal are especially interesting, as evidences of the very remarkable sympathy which exists between every part of the body and this great visceral apparatus. The nervous and circulating systems become almost immediately affected. In the earliest stage, the pulse very generally is full and frequent, the skin hot and dry, and the general symptoms are those of synchus. This feverish state has either a continued, remittent, or even an intermittent type, and it may be inflammatory, mucous, bilious, or putrid in its prevailing characters. These different forms of the disease are less dependent on the intensity of the gastro-intestinal inflammation, than on the conditions of the nervous and sanguineous systems of the patient, just before and at the period of his illness. Now, although these various types of fever are very often accompanied, perhaps we may even say occasioned, by that diseased state of the mucous lining of the stomach and bowels which we have been describing, it is ever to be remembered, that they may exist without any such local disease. (This paragraph announces the dissent of Andral from the exclusiveness of the Broussaian and other such creeds.—*Rev.*)

It cannot, therefore, be too urgently impressed on the mind of the young physician, that no disease requires a more minutely patient examination, to arrive at correctness of diagnosis and success of treatment, than gastro-enteritis; and none more imperatively demands the exercise of an unbiassed mind, which will inquire, and think, and determine for itself, from actually appreciable facts, and not be led along by the descriptions of authors however distinguished. Let it not be forgotten, that gastro-enteritis may be present, even to an alarming degree, without being indicated by any distinct symptoms of local distress; and that, perhaps, the only visible sign of its presence may be a febrile movement, sometimes simple, in other cases accompanied with divers disturbances of the nervous system. Such ataxic and adynamic forms of the disease are, we repeat, influenced less

by the intensity of the local mischief, than by the conditions “d’innervation et d’hématose” which may be existing at the period of invasion.

As we might, *à priori*, have supposed, the general character or type of the constitutional disturbance is greatly influenced by the age of the patients, as well as by their individual temperaments, the season of the year, the climate, &c. In infants and young children, it frequently assumes a convulsive or a comatose form; in old people, it is very apt to become alarmingly adynamic, and have a tendency to extreme apathy or exhaustion. When this tendency shews itself in the early stages of the disease, the diagnosis may be very obscure and uncertain, and the physician be led to suppose the case to be one of primary encephalitis, or meningitis.

As intimately connected with gastro-enteritis, in many of its essential phenomena, and necessary as its study is for the elucidation of abdominal disease, the subject of “follicular enteritis,” or inflammation of the mucous follicles which are scattered over the inner surface of the intestinal tube, naturally follows for our investigation. It is well known that these follicles, or minute glands, are variously arranged in different portions of the bowels. In some places they are single, scattered, and separated the one from the other; whereas, at other points of the canal, especially along the tract of the ileum, they are assembled together in groups. The former have been called “*glandulæ solitariae, vel Brunneri*,” the latter, “*glandulæ aggregatae, vel Peyeri*.” It has been only within the last twenty years, that the attention of physicians has been studiously directed to the pathology of these glands, and to the diseased states of the system, which seem to be induced by inflammation, and other morbid processes affecting their structure.

MM. Petit and Serres described these lesions in 1811, and denominated the accompanying constitutional disease “entero-mesenteric fever.” MM. Chomel and Louis subsequently described it under the old name, “typhoid fe-

ver;" M. Bretonneau has more recently called it "dothinteritis;" Broussais has applied the same name to it, as to the disease which we have already alluded to, viz. "gastro-enteritis;" Bouillaud prefers the title, "entero-mesenterite typhoïde:" in the first vol. of my *Clinique Médicale*. I employed the term "exanthème intestinal," but now I think that the term "follicular enteritis" is more explicit and appropriate. The anatomical characters of this disease ought to be thoroughly understood by every practical physician. It is primarily and essentially an affection of the mucous follicles, or glands of the bowels. The mucous coat itself is involved only secondarily, as from the contiguity of the morbid glands; and, indeed, the circumscribed limits of the numerous inflamed and ulcerated points form a very remarkable feature of the pathology of the disease. The portions of the intestinal tube most frequently and most seriously affected, are the lower extremity of the ileum, the ileo-cæcal valve, the cæcum itself, and some parts of the colon. The upper divisions of the small intestines are much more rarely diseased, and in the majority of cases, the stomach does not exhibit any abnormal appearances: "celui-ci est sain dans le plus grand nombre des cas—on n'y a jamais observé de cryptes isolés." In the early stage of the disease, the isolated follicles are seen as small papulæ, raised above the level of the mucous surface. At first they are of a lively red colour; but, during the course of the disease, they become of a brownish hue: sometimes these papulæ quickly subside, and even disappear altogether; at other times they are more stationary, and pass to a state of chronic enlargement. When they become ulcerated, the ulceration commences at the summits of the papulæ, and extends gradually deeper and deeper to their bases. The number of these papulæ is very various in different cases—they may be either few and scattered, or more numerous and confluent, just as we find that the eruption on the skin in small-pox is sometimes distinct, and at other times is confluent. The resemblance of the intestinal to the cuticular erup-

tion is more striking, when the follicles of the former become ulcerated, for then they very frequently exhibit obvious umbilicated depressions at their summits. When the ulceration has proceeded farther, the entire substance of the enlarged follicles may be utterly destroyed, and, as it were, eaten clean away.

But it is chiefly among the aggregate or clustered follicles, the glandulæ Peyer, that we shall find the most obvious and unexceptionable evidences of the disease at present under consideration. The groups of these follicles, which are by no means very obvious in the healthy state, present, during the course of a typhoid affection, the appearance of ovular or rounded patches, of a bright red or brownish colour. The prominence of these patches is attributable, not solely to the enlargement of the follicles, but also to the thickening of the surrounding submucous cellular texture. Their surface is uneven, granular, or somewhat honeycombed. When the disease terminates by resolution, the papulæ subside, and lose their bright colour; after the lapse of some time, the affected surface exhibits numerous dark dots, and hence it has been described as resembling a recently shaven beard. When, on the other hand, the diseased process advances, the papulæ become ulcerated, the erosions become deeper and more extensive, until the whole extent of the clustered patches becomes one ulcerated surface. In some unfavourable cases, the patches are seized with gangrene; the eschars, on becoming detached, leave deeply-seated excavations, the edges of which are formed by the mucous membrane, and the bases by the submucous cellular, or even by the muscular tissue of the bowel. It is not of unfrequent occurrence, that the ulceration, at some points, proceeds through the entire thickness of the gut, and thus gives rise to perforations, through which the intestinal contents may escape into the abdominal cavity. Occasionally, considerable branches of the mesenteric bloodvessels have been exposed, and even opened by these ulcerations, and patients have died from the alarming

hæmorrhage which has ensued. When the ulcers heal, their edges and bases become gradually smoother and more level—the surfaces become covered with a thin pellicle, and this pellicle assumes, in course of time, all the appearances of a genuine rudimentary mucous membrane, and, like the mucous coat of the bronchi and frontal sinuses, without any villousities. It is not unfrequent to observe a puckering of the surface, at the places where the ulcers have once existed. The number of the ulcerated intestinal patches is very different in different cases; sometimes they do not exceed two, three, or four in number; whereas, in other cases, they are greatly more numerous. As a general remark, it may with truth be asserted, that the gravity of the symptoms of the typhus fever is proportionate, *cæteris paribus*, to the number and extent of these lesions. The mucous surface, in the intervals between the diseased patches, may be either sound, or may exhibit traces of disease, varying from a simple inflammatory redness, to a thorough “ramollissement” of its texture, or to distinct and deep corroding ulceration. The redness, and even the softening, may extend as high up as the stomach. Even the œsophagus and pharynx have been found “*offrir plus souvent des ulcerations dans cette maladie, que dans toute autre affection.*”

It is a question of much importance, to determine whether the symptoms of typhus fever are attributable to the follicular disease, or whether this disease is to be considered as only coincident, or simultaneous—and, in short, whether it is one of the effects, or whether it is the cause of the fever. Have we data to shew at what period of a typhus case the follicular changes are first appreciable? Perhaps not; for we know of no example, where death occurred before the fifth day from the invasion of the fever. One such case, indeed, has been reported by M. Bretonneau, and in this case he found a distinct intestinal eruption. Andral has seen it in patients who have died on the sixth day; and Chomel and Louis not earlier than on the seventh and eighth days.

The question must, therefore, be considered as still open to discussion. Another practical question, of almost equal importance, is whether genuine follicular enteritis ever exists, without being accompanied by the presence of typhoid symptoms.

“A cette question (says Andral,) on peut hardiment répondre par la négative.” Patches of ulceration on the mucous surface of the bowels have indeed been discovered, in the bodies of small-pox and scarlet-fever patients; but this is an argument rather in favour of, than discountenancing, the idea of the connexion of the morbid lesion with the existence of typhus fever. In the epidemic cholera also, it is well known that many authors contend, that the follicular disease of the bowels is of invariable, and even of necessary occurrence; but, independently of the admitted fact, that the diseased patches which were observed after death from cholera, did not exhibit all the genuine appearances of “follicular enteritis,” it may be remembered that the cholera did, in truth, present many of the strongest features of a most malignant typhus. The follicular ulcerations, frequently found in the bodies of phthisical patients, are obviously very different from the diseased changes which we have described as coincident with typhus.

Associated very generally with the genuine follicular ulcerations, are certain morbid states of the mesenteric glands and lymphatics. These are found in a hard, swollen, and inflamed condition, and not unfrequently they are converted into suppurating cysts, full of matter. The spleen is frequently much enlarged at the same time, even to double or triple its natural size. More rarely it is reduced to a pappy consistence, without any increase of bulk. The lungs, too, in many cases of follicular enteritis undergo serious morbid changes, varying indeed in gravity, from simply increased vascularity to complete hepatization, or to remollissement of their structure. Perhaps no set of organs, and no portion of the system, is more frequently involved in diseased action by the existence of fever

depending upon ulceration of the intestinal glands, than the blood-vessels, and more especially their contents. Of late years, the attention of pathologists has been more studiously directed to the examination of the blood in this and other maladies, than it had been since the downfall of the ancient humoral doctrines. Already much curious and important information has been derived from such enquiries.

With respect to follicular enteritis, it is still a disputed point whether the morbid alterations of the blood (amounting sometimes to a very copious admixture of purulent matter) are always consecutive to the disease of the bowels, or whether it is not frequently coexistent with, or even antecedent to, the earliest occurrence of this disease. According to one set of physicians, the lesion of the intestinal follicles is the primitive mischief; it is the origin and point of departure to all the disturbances of the nervous and of the circulatory systems. But while they contend for this connexion and dependence of the constitutional symptoms on the local disease, they are quite willing to admit that, when these symptoms have been once induced, they may persist, as it were, spontaneously, and become more and more serious.

The intestinal disease may be said to act in the production of the nervous disturbance a similar part to what the wound does in a case of traumatic tetanus. The wound is certainly the primary cause of the tetanus; but the wound, it is well known, may heal, and yet the tetanus may continue and prove fatal.

In like manner the local lesion may act, in cases of the follicular disease of the intestines.

In opposition to these views, it is maintained by other physicians that the local mischief is the effect of the previously-established constitutional disease; that it is therefore a consecutive lesion, and ought to be regarded only as one, among others, of the phenomena of typhus fever; just in the same manner as the cutaneous eruption of a genuine exanthematous fever is to be viewed not as the cause, but merely as

a feature or symptom of the general malady.

Whichever of those doctrines we receive, and it is certainly not easy to determine which of the two is the more correct, let it never be forgotten by the practical physician, that when once the system becomes involved in the constitutional disease, the general symptoms most commonly overpower, as it were, and thus mask and conceal the symptoms of the local distress; so much so, that unless a most rigid and minute examination of the patient be invariably instituted, the very existence of any intestinal disease may not even be suspected, and the case will be apt to be regarded as one of a fever, which is strictly and essentially constitutional, or appertaining to the whole system, unmodified by any local malady.

The etiology of follicular enteritis suggests some questions of very difficult solution. Why the peccant matter or offending cause should affect the glands of the intestinal canal, in preference to other parts of the body, we cannot form even a rational conjecture; and we must be therefore satisfied with the simple knowledge and affirmation that it is so.

When any acrid or irritating substance is introduced into the stomach and bowels, we can readily understand how an inflammatory action of their lining membrane is induced; but such is not the case, as far as we are aware, in the majority of cases of that follicular disease, which we are now considering. We are therefore obliged, in our ignorance of the more immediate causes of the morbid process, to conjecture that there is some specific agent, which determines its development in the intestinal gland; just in the same manner that in the exanthemata there is a specific determination to the skin. In both cases there is a *something* which is peculiar, and *sui generis*, in its origin and mode of operation. We know that, although we irritate the skin in all sorts of ways, and with every kind of stimulant, we cannot induce a variolous, scarlatinous, or rubeolous eruption: and so it is with follicular enteritis; no irritants received into the stomach

and bowels will occasion those morbid changes of the intestinal follicles, which are found in the bodies of those who die of typhus fever. It has been indeed affirmed by some experimenters, that by injecting putrid matters into the veins of animals, the symptoms of genuine typhus have been induced, and that, on examining the bodies of such animals as have died in consequence of the operation, the intestinal follicles have been found inflamed and ulcerated. But these experiments require to be repeated before we can admit the correctness of the conclusions which have been drawn from them; and it may be worthy of notice, that in the animals on which the trials have hitherto been made, viz. horses and dogs, the intestinal follicles, in a state of health, are proportionably much more distinctly developed than in the human subject; and it is therefore possible, that the normal developement may have been sometimes mistaken by pathologists for morbid enlargement. In tracing the history of follicular enteritis, all attentive observers have been struck with the especial liability to the disease, which those who have recently changed their residence from the country to a large city, seem to encounter. By far the greater number of the patients who are admitted with fever into the public hospitals of Paris occurs among those strangers who have recently arrived in the metropolis. It is generally during the first two years, and more especially from the sixth to the fifteenth month of their residence, that the disease is apt to invade them. We need not say that the disease is always more prevalent and more malignant in the crowded than in the more open and airy parts of the town.

With respect to the contagion of the fever, which accompanies follicular enteritis, M. Andral uses these words: "I should not hesitate to answer this question in the negative if I were to found my judgment on the results of my own observations, excluding the reports of others. I have not met with a single case, which unequivocally argued in favour of contagion." This distinguished physician, however, admits the

high authority which countenances the opposite opinion. He alludes, in terms of particular respect, to the names of MM. Bretonneau and Gendrin, who have described several epidemics of the disease (denominated by them dothi-enteritis) with more than usual zeal and accuracy, and who have been led to believe in its occasional contagiousness. "Il faut savoir douter," says M. Andral, with much truth and liberality of sentiment, "là où il y a doute." One of the most interesting features in the history of this disease consists in the very great difference in the liability to its attack of different ages. It is most frequent in persons from 18 to 30 years of age; it is comparatively rare among persons above forty; and still more so among those who have passed their fiftieth year. Not a single authentic case of genuine follicular enteritis in a patient upwards of 60 years, has been witnessed by M. Andral. It is sufficiently common in persons of from fifteen to eighteen years of age; but it is certainly of rare occurrence in younger patients. Some physicians have asserted that genuine typhus is never observed in very early youth; but this assertion must be received with hesitation.

Dr. Constant, who for some years past has devoted much attention to the practice of the Hôpital des Enfants Malades, communicated to M. Andral the results of the observations he made there during a period of 22 months. Twenty cases of genuine typhus occurred during this period; and the following table shews the relative frequency of the disease at different ages.

Two of the patients were 4 years old.	
One	7
Two	8
Two	9
One	10
Four	11
Four	12
Two	13
Two	14

Lancette Française.

ON METHODIC COMPRESSION, AS A
REMEDIAL AGENT IN DROPSIES.

The most obvious and useful effects of compression, applied over a considerable extent of surface, are to diminish the distention of the blood-vessels, to promote the action of the absorbents, and to give support to parts which have become relaxed and enfeebled.

These effects are very apparent in the treatment of elephantiasis of the leg, by a steady and methodic compression of the limb, exercised by means of strips of adhesive plaster, and by rollers applied regularly round its whole extent from the toes upwards. Certain cutaneous phlegmasiæ, especially those forms in which the subjacent cellular texture becomes involved, have been successfully treated in the same manner. M. Bretonneau, in his thesis on this subject, published in 1815, has narrated several cases, to prove its good effects.

It is, however, more particularly in œdematous and other dropsical affections, that compression may be used with the most decided advantage. The following are some, from a multitude of examples, in which Dr. Bricheteau has had recourse to it.

CASE 1.—*Edematous Swelling of the Right Lower Extremity.* A woman, 52 years of age, whose health had been hitherto very good, observed two months previous to her admission into the hospital, that the right foot and leg had become considerably swollen, so as to incommode her greatly in walking. In the course of a fortnight afterwards, the swelling extended, and reached as high as the top of the thigh. The catamenia had been absent for four months. She was ordered warm-baths, cooling evaporating lotions to the limb, and blisters on the calf of the leg.

On the 12th of April, when received into the hospital St. Antoine, the thigh, leg, and foot, were found to be much swollen, the skin being red, distended, and shining, and when pressed with the finger, it exhibited only "une empreinte fugace." The course of the large blood-vessels was unattended with

pain or engorgement: all movements of the limb were constrained and uneasy. At the knee, the circumference of the limb exceeded that of the other one by eight or nine inches. The inguinal glands were not swollen. The general health was unaffected.

M. Rayer, under whose care she was placed, ordered the patient to be bled, and to apply emollient fomentations to the affected parts. The tumefaction, however, continued to increase; and the patient began to experience pain along the course of the blood-vessels. Absolute rest was enjoined, and the use of the fomentations was continued. On the 15th, scarifications were made at different parts of the thigh, and on the dorsum pedis. A small quantity only of serosity mixed with blood escaped from the punctures. On the 27th, the punctures being healed, compression by means of a roller applied from the toes to the middle of the thigh was commenced. During the following three weeks the swelling of the limb very sensibly abated.

On the 21st of May, in consequence of general malaise, head-ach, and an eruption of papulæ on different parts of the surface, the patient was bled twice from the arm;—the blood was sizzly.

The limb continued to decrease in volume, but it was still hard to the finger, and the skin was tense and firm. In the first week of July, the same means having been persevered in, the patient began to walk about a little; and on the 19th of this month she was discharged, although the limb remained still somewhat swollen, and the subcutaneous cellular tissue rather indurated.

[*Remark.* The recovery was certainly very tedious, and after all not complete. The constitutional treatment was probably not pursued with the requisite diligence.—*Rev.*]

CASE 2.—*Ascites cured by Compression.* In 1824, Mr. Godelle published in the *Nouvelle Bibliotheque Medicale* the following report of a case in which compression was employed with decided advantage.

A youth, 18 years of age, of a feeble sickly constitution, was admitted on the 5th of July into the hospital at Soissons, in consequence of diarrhœa, colicky pains of the abdomen, &c. The skin was hot and parched, the pulse was small, contracted, and sharp; the urine was scanty, and of a high colour; and an indistinct fluctuation within the abdomen was perceptible.

Leeches were applied on the epigastric and hypochondriac regions; oily liniments and emollient fomentations were then used; and mucilaginous nitrous drinks and a low diet were prescribed. These remedies were, with occasional slight changes, continued for a fortnight. Although the abdominal effusion did not diminish, the patient left the hospital; but he soon returned in a worse condition than before. He was harassed with a dry frequent cough; the abdomen was much distended and painful; the urine was scanty and red; the skin was dry; the pulse was small and quick; and for some days past he had been teased with diarrhœa. Recourse was again had to the use of oily embrocations rubbed on the abdomen; and small doses of digitalis were added to the mucilaginous drinks. The swelling of the abdomen however progressively increased, so as seriously to impede the breathing, and even to threaten suffocation. M. Godelle being anxious to try the effects of compression, before resorting to the operation of paracentesis, ordered that a roller should be applied firmly and regularly round the abdomen. No sooner was this done, than the respiration became more easy and free. As the roller became displaced by the movements of the body, a broad belt, laced like a lady's corset, was substituted for it.

"Clinique jours suffisent pour ramener le ventre à son volume ordinaire et faire disparaître le liquide épanché." As the absorption of the effused fluid proceeded, the compression was steadily increased, and small doses of digitalis were administered at the same time.

CASE 3.—*Ascites of six months' standing.* A young woman had been affected with ascites for six months before ap-

plying for medical relief. The effusion had come on very gradually, and had been unattended with pain, or with any constitutional disturbance. She attributed her illness to exposure to cold, and to residing in a damp house.

The abdominal effusion increased so much within the three first months, that the breathing became much impeded, and her general health began to suffer. She was admitted into the hospital on the 23d of January. The fluctuation could be very easily recognised. No signs of any visceral disease were present. The symptoms were relieved for a while by the use of diuretics, squill, and digitalis, and of drastic purgatives; but the symptoms returned with greater severity than before, and it was then deemed quite necessary to withdraw the fluid by tapping. After the operation, active doses of jalap, combined with nitre, were administered, and had the effect of increasing the urinary discharge so much, that the abdominal effusion was kept under. But this favourable condition was merely temporary, and the ascitic symptoms speedily became as aggravated as ever. Recourse was then had to "compression methodique," by means of a bandage or belt, well fitted to the whole surface of the abdomen, and laced like the female corset, so that it could be readily tightened or slackened according to circumstances.

The pressure and support were thus uniform at every part. "Les urines ne tarderent pas à couler plus abondamment, et éprouverent en meme temps un changement favorable dans leur couleur et leur densité." The size of the abdomen gradually decreased, and in the course of a month, all sense of fluctuation had ceased.

CASE 4.—*Ascites.—Compression continued for eight months.* A man, nearly 60 years of age applied to Dr. Brichteau in consequence of ascites, which had existed for several months. His general health was very indifferent, and his appearance indicated a strong tendency to universal dropsy, the features being pale and bloated, and the skin being lax and cold. He suffered occa-

sionally from epigastric pains, vomiting and dyspepsia. On examining the abdomen, some degree of induration in the epigastrium and right hypochondrium was distinctly perceptible.

Leeches and afterwards blisters therefore were ordered to be applied over this region, and various diuretic medicines were administered. Recourse was then had to the continued use of graduated and methodic compression by means of a laced belt, which firmly and equally embraced every point of the abdomen, from the chest to the haunches.

The belt was never laid aside, night or day, during the following eight months, although for some time previous, all signs of abdominal effusion had vanished. Dr. B. attended this patient subsequently for another complaint; but there was no return of the ascites.

CASE 5.—Ascites —Ague.—Cure in three months. A woman, aged 37, was admitted into the hospital in consequence of an attack of ague. The use of the sulphate of quinine and other appropriate remedies speedily removed this disorder; but then symptoms of anasarca and ascites began to shew themselves. The abdominal effusion increased so much, that a considerable degree of dyspnoea was induced, especially when the patient lay down, or took any active exercise. Diuretics and purgatives failed to afford much relief; and paracentesis was therefore performed. Upwards of twelve pints of fluid were withdrawn. The effusion so quickly returned, that the operation was again necessary in the course of three weeks. For three or four days, the fluid continued to ooze copiously from the puncture made by the trocar. Immediately after the performance of the second operation, the abdomen was equally and firmly compressed by means of a roller applied with much exactness and care, and "quelques boissons diuretiques et des purgatifs" were administered. The use of the roller was continued steadily for three months, at which time the patient was pronounced entirely cured. Four months afterwards this woman returned to the hospital, in consequence

of an attack of acute gastro-enteritis, which ultimately proved fatal. On dissection, the abdomen was found quite free from any effusion. There were some adhesions of the peritoneum at several points; but there was no decided disease of any part, except of the mucous coats of the stomach and bowels, which exhibited the traces of active inflammation.

In the 40th volume of the *Annali Universali* a case illustrating the curative effects of steady compression of the abdomen in ascites is recorded. The disease had supervened upon an attack of peritonitis, and had existed for several months, before the patient applied for medical assistance. She suffered from derangement of the digestive functions, and from general feverishness—the urine was scanty and turbid; and there was considerable emaciation of the whole frame. The distention of the abdomen was so great, that no accurate examination of the state of the viscera could be instituted. The usual remedial means having utterly failed, Dr. Speranza was induced to try the effects of graduated compression of the abdomen, by means of Dr. Monro's bandage. The flow of urine became speedily much increased, the patient passing sometimes as much as twelve pints daily. Under the use of tonic medicines and of a generous diet, a complete cure was soon established.

CASE 7.—Ascites of four years' standing. A woman, 40 years of age, had been affected with a dropsical enlargement of the abdomen for nearly four years, when she applied to Dr. B.

The disease had come on very gradually, and it caused but little inconvenience, except from the bulk of the swelling. Menstruation had been regular, and the other functions of the body were but little disturbed.

Dr. B. recommended that the fluid should be drawn off by tapping; but she objected to this operation. Diuretics and purgatives were used for some time with little benefit; and then she submitted to paracentesis. Twenty pints of a limpid serum were drawn off. No traces of diseased viscera could

be detected on the most careful examination; which was most satisfactorily made, in consequence of the extreme thinness of the abdominal parietes, when relieved from their distention. The use of the laced belt was steadily persevered in for several months after the operation; and by this simple means alone, without the assistance of any other remedy, a perfect cure was effected. The patient continued to wear the belt for many months after all traces of fluctuation had disappeared.

The curative effects of methodic compression in dropsical affections of the abdomen are sufficiently illustrated by the preceding reports. Of late years, its use has been extended to the treatment of chronic hydrocephalus by certain American and English physicians. Dr. Glover, of South Carolina, having unsuccessfully tried all the usual remedies in a case of a young child affected with this form of the disease, resolved to draw off the encephalic fluid by a paracentesis of the cranium. The circumference of the head measured two feet; the sutures were very open and wide; the fluctuation was distinctly perceptible; there was strabismus, but the general health of the patient was very satisfactory. The puncture was made in the course of the squamous suture. A pint of serum was drawn off through the canula. The falling together of the integuments and "*le jeu des pieces osseuses les unes sur les autres*" induced Dr. G. to withdraw no more at the time. He encircled the head with a bandage, applied several times round, in order to maintain a steady and equable compression on every part. No disagreeable symptoms ensued. The urinary secretion became very sensibly increased in quantity. Two days afterwards another pint of serum was withdrawn by the same orifice, without any disagreeable result, and the bandage was immediately re-applied. After other four days had elapsed, a new puncture was made, to give exit to a fresh accumulation of fluid; and this time, not less than three pounds were drawn off. During the following ten days, the infant appeared to improve gradually, under the influence of the methodic compression of the head. It

gained flesh; the cranial bones became approximated to each other; the urine flowed copiously and the strabismus ceased.

Notwithstanding these favourable changes, a re-accumulation of the fluid required the performance of another operation; the puncture was made in the course of the coronal suture, and a pint of fluid escaped. For upwards of a month, a decided amendment followed this operation; but it was subsequently found necessary to repeat it twice. The child died on the eighth day after the last operation. On dissection, it was found that the substance of the brain was almost completely wasted away, and that there were three pints at least of fluid within the cranial cavity. In this case of Dr. Glover, 156 ounces in all were withdrawn at eight different operations, in the course of four months. (*New York Med. Repos.* vol. 4, 1819.) Unfortunately the results of the majority of the cases hitherto recorded, where paracentesis of the cranium has been performed have been the same, as in Dr. G's case. At one time it was supposed, that the water in chronic hydrocephalus was always collected in the sac of the arachnoid, and not within the ventricles, and consequently that the cerebral substance need not be wounded in the operation; but this is now known to be a mistake.

Dr. Graefe has narrated the particulars of one successful case in his practice. The infant was born hydro-cephalic. When four months old the head was punctured, and the operation was subsequently repeated eleven times in the course of six months. After the last puncture, the sutures closed. At the age of two years and a half, the child was shown to the Medico-Chirurgical Society of Berlin. Mr. Russell of Edinburgh also has recorded a successful case; and we are informed that Dr. Conquest of London has succeeded in four out of nine cases operated on by him. M. Breschet is therefore not justified in condemning so peremptorily the operation, as we observe that he has done in the following passage from the article *Hydrocephale*. *Dict. de Medecine*, vol. ii.; "*cette evacuation amene la mort plus ou moins prompt-*

ment, et dans tout desespoir de cause, rien ne peut excuser la pratique d'une operation qui accelere la fin des malades, et qui leur fait souffrir des douleurs inutiles." Although we caution our readers not to anticipate great success from the operation, yet under certain circumstances, and in judicious hands, it may very properly be resorted to.

The employment of compression only (without an operation), has been recommended by Sir Gilbert Blane and others; and as this remedy is unattended with any danger, and its employment may be suspended at any time, when it appears to be unadvisable, it will be more generally adopted, than the operation of paracentesis of the head.

The compression may be exercised, by means of a roller only, applied several times round the head, or by using encircling strips of plaster at the same time. In the first case, related by Blane, the child was sixteen months old; the head had been very large from its birth, and the anterior fontanelle was very large. There was also a curvature of its spine. For several months the child had been almost constantly in a state of stupor and oppression; the pupils were dilated; and from its cries and groans, and from applying its hand frequently to the head, it seemed that the little patient suffered much inward pain. A roller was applied with moderate tightness round the head, and an active purgative was given occasionally. In the course of three months, all the cephalic symptoms had ceased, and the health of the infant was completely restored.

The second case occurred in an infant, three years old; the head was very large, and the anterior fontanelle still open. The same treatment, as in the former example, was adopted; and with most marked advantage. This practice has been followed by other physicians with occasional success. Fortunately it is quite safe, and if judiciously employed, cannot produce any evil. "La compression" says Dr. Bricheteau "loin d'avoir causé des accidens, a produit du soulagement, et ralenti l'épanchement du liquide dans la cavité crânienne; de plus elle a augmenée la

secretion urinaire; phenomene digne d'être medité, surtout parcequ'on en observe un tout-a-fait semblable lorsqu'on comprime le ventre chez les individus atteints d'ascite."

Compression acts in the cure of dropsy, partly by preventing the further exhalation of fluid, and partly by exciting the absorption of that already deposited. The pressure exercised by the bandage is communicated to the contained fluid; this in its turn presses on the exhalent surface, and mechanically prevents the afflux of any more serosity.

Thus the affusion necessarily remains stationary, since it is not possible that any fresh fluid can be admitted into a cavity which is already not distensible; "d'où une retropulsion de la serosité séparée du sang, retropulsion qui se communiquant de proche en proche dans le canaux pleins, doit apporter une modification quelconque dans le mecanisme de la nutrition." This modification must be somewhat analogous with the effect which compression on any bloodvessels has in throwing back the blood into those vessels, which are either above, or below the point compressed, according as the vessels are arterial or venous. When any effused fluid has been dispersed, it is customary to say, that the absorbents have "repompé" it; but perhaps it might be more correct to attribute the dispersion to a sort of imbibition, the mechanism of which is analogous to that of compression when applied to any of the bloodvessels. No one doubts in the present day, that, by means of imbibition, the living tissues are susceptible of being penetrated and traversed by the animal fluids, without the intervention of any exhalent, and absorbent process. There are cases indeed, in which the supposition of any imbibition is not easily admissible; as, for example, when compression causes the disappearance of an albuminous mass floating in a fluid; and also when the compression is exercised on a cavity which is surrounded with hard unyielding structures, as in the case of the joints. M. Godille has attributed the remedial effects of compression in the treatment of dropsies, to an increased

activity of the venous absorption, induced, he says, by the retardation of the blood in the abdominal aorta, and by the pushing forward (refoulement) of the abdominal venous blood, and its accelerated return into the vena cava. This explanation, which seems to us not very perspicuous, is rather contradicted by the effects of copious bleedings; for these, it cannot be denied, render the arterial and venous circulations more free and rapid, and at the same time "actifvent d'une maniere notable l'absorption des fluides epanches."

Another effect of continued compression, is the production of adhesions between the different abdominal viscera; adhesions which necessarily assist in opposing future effusions.

In concluding these remarks on compression as a remedy against dropsy, it is proper to observe, that in some patients it is inadmissible, in consequence of its inducing dyspnoea; "par un mecanisme qu'il est facile de comprendre."—*Clinique Medicale de l'Hopital Necker.*

TREATMENT OF GONORRHOEAL OPTHALMIA.

Almost all surgeons, of large experience in the diseases of the eye, admit that gonorrhoeal ophthalmia is attributable generally, if not solely, to the inoculation of the poisonous virus, either directly from the urethra, or from an eye already affected with the disease. In the few cases, in which we cannot trace the operation of this cause, we may reasonably infer that the patient has accidentally and unknown to himself conveyed the matter to his eye: this he may have done during sleep, or when his attention was at other times unguarded. What confirms this view of the etiology of gonorrhoeal ophthalmia, and establishes a very marked difference between it, and other forms of purulent ophthalmia, such as the catarrhal, is that in the majority of cases of the former, one eye, and that usually the right one, is involved, whereas, in the latter, both are almost always affected simultaneously. Beer, Cooper, Vetch,

are high authorities for these assertions.

Now if the gonorrhoeal species was owing to a metastasis, or sympathetic translation of the morbid action from the urethra to the eye, we might surely expect that both organs would suffer at the same time. Some surgeons have objected to the view, which we have taken, on the ground that if gonorrhoeal ophthalmia was generally induced by the direct application of the virus to the organ, the disease would be infinitely more frequent, as it is well known, that most patients observe few, or no precautions against its occurrence. But then, not to allude to the merely conjectural character of the objection, let it be remembered, that if the rarity of the disease, compared with the extreme frequency of the inducing cause, is to be received as an argument against the idea of a direct inoculation, the same argument applies to the other hypothesis, which assumes, that the disease is of a metastatic or mere sympathetic origin. Why should the supposed metastasis, or morbid sympathy not occur, more frequently than it does? The assertions of the most experienced surgeons all lead to the same conclusion. Sanson and Mr. Lawrence distinctly affirm that they have not met with a single case of gonorrhoeal ophthalmia, when the urethral discharge had altogether ceased. M. Sanson says, that in the few cases, in which the discharge had apparently ceased, he could always satisfy himself of the actual existence of it, by squeezing the extremity of the penis. In reference to the supposed metastasis of the poisonous matter, it deserves to be remembered that the urethral discharge is not only not always suppressed, but that in some cases it even becomes more profuse, after the ophthalmia is fairly established. Another important fact, is that genuine gonorrhoeal ophthalmia is very rarely met with in females. Beer and Lawrence tell us that they have never seen a case of it in women. M. Dupuytren has indeed expressed an opposite opinion; but, in spite of his high authority, we are compelled to assert that his opinion on this subject is not quite correct. The causes of the extreme

rarity of the disease in females is probably to be sought for in the admission, that they "ont beaucoup moins que les hommes l'habitude de porter les doigts à leurs organes genitaux, et que chez elles on rencontre moins frequemment ces ophthalmies chroniques que nous avons vues predisposant si fortement, à contracter l'ophthalmie blennorrhagique." If this explanation be correct, and we believe it to be so, another argument against the metastatic origin of the disease is furnished to our consideration. As the chief object of these remarks is to direct the attention of our readers to the treatment of gonorrhœal ophthalmia, we shall now without further delay proceed to glance at the comparative merits of the very different modes of cure, which have been proposed. Perhaps no disease demands greater promptitude and decision of practice, than this form of ophthalmia. The organ may be, and very often is, irretrievably damaged in the course of four and twenty hours, the cornea having become opaque and ulcerated, and even the internal structures of the eye-ball having already proceeded to disorganization. This extreme rapidity of the mischief, coupled with the great discrepancy of the most distinguished oculists as to the most efficient means of arresting its progress, is apt to confuse and bewilder the young practitioner, and to render his practice unsatisfactory to himself, and probably most unfortunate for his patient. The most vigorous antiphlogistic treatment considered by some to afford the only rational hopes of saving the sight, is confessedly very often, or rather almost always, wholly ineffectual, unless enforced from the commencement of the disease, before the suppurative stage has become established. Lawrence, who, it is well known, is a most resolute advocate of depletion, admits, that the loss of vision is almost inevitable, if the surgeon be not called at the setting in of the first stage. We shall not argue this therapeutic question on any speculative grounds, as to the nature, or character of the inflammation in gonorrhœal ophthalmia, but shall merely glance at the results of the antiphlogistic practice, as

recorded in the writings of some of its most distinguished supporters. Lawrence has detailed twenty-four cases in all of gonorrhœal ophthalmia. In fourteen of these, the disease was of the most acute form; nine of the patients lost the sight of the affected organ, in consequence, either of supuration and ulceration, or of induced opacity of the cornea. In the other five cases, the sight, although impaired, was saved; in all of them, the cornea was left partially opaque, and in three, the anterior surface of the iris had contracted adhesion to the inner surface of the cornea. The following cases will give some idea of the *success* of the antiphlogistic treatment. A youth, 20 years of age, had inadvertently wiped his eyes, with a cloth, which was stained with some urethral discharge. When he applied for relief, the cornea of the left eye presented a whitish-coloured eschar, which covered nearly a fourth part of its surface; the right eye was not affected at this time. In the course of forty-eight hours, eighty ozs. of blood were drawn by the lancet and cupping-glasses, and 170 leeches applied, not to mention the use of blisters, drastic purges and antimonials. On the fifth day, an ulcer appeared on the right cornea, and the left cornea was somewhat staphylomatous. Five weeks after this date, it is reported that the ulcer of the right eye was not quite healed; and the sight of the left eye was still very imperfect. In the second case, the depletion was carried to a greater extent. In the space of two days, 154 ozs. of blood were drawn from the arm and temporal artery; eighty leeches were applied; strong doses of calomel and saline purgatives were taken every two hours, and blisters were applied behind the ears and on the temples. On the ninth day, the hyaloid membrane protruded through an ulcerated opening of the cornea. A month after this date, the swelling of the cornea had not entirely disappeared; but the sight was but little affected.

A year and a half afterwards, the cornea exhibited an opaque spot, about a line in diameter, and to this spot, the iris was still adherent. These cases

afford a fair specimen of the practice pursued by this eminent surgeon, and of the success which has attended it in his hands. Indeed it may be fairly asserted that not one case of perfect and absolute cure has been recorded by him. Mr. Wardrop has been quite as bold, and apparently also, about as *fortunate* as his brother Anglois. He is candid enough to acknowledge that the only case of severe gonorrhœal ophthalmia, in which he effected a complete cure, was that of a young woman, who was bled from the arm, as often as blood could be obtained. She lost 170 ozs. in three days! The late Baron Dupuytren, convinced by unfortunate experience of the inefficacy, not to speak of the danger, of extreme depletion in this disease, renounced it in the later years of his practice, at least as the exclusive, or even as the principal means of cure; and the same remark is true of M. M. Sanson, Roux, &c. The opinions of these surgeons are the more valuable, because every one of them had at one period or other of their professional career, trusted to depletory measures in the treatment of gonorrhœal ophthalmia, on the supposition that the disease was purely inflammatory, and was therefore to be combated only by antiphlogistic remedies, proportioned in activity to the extent and severity of the morbid action. All of them have subsequently made a sacrifice of these opinions, by finding that the practical conclusions which are derivable from them are condemned by experience. In the present day very few of the French surgeons trust to the depletory practice as the chief implement of cure; and those that do, without exception confess that the results which they have obtained in severe cases, have been very rarely satisfactory. It is not to be inferred, that bleeding is to be altogether discarded from the treatment of gonorrhœal ophthalmia—far from it. At the commencement of every case, one or even more large venæsections ought to be practised; but other active means must be resorted to at the same time, and of these perhaps the most powerfully efficacious is the local use of the nitrate of silver, especially with excision

of a portion of the chemosed conjunctiva, according to the method now uniformly followed by M. Sanson at the Hôtel Dieu. We have already stated that this eminent oculist has been for some years past convinced of the “inefficacité absolue” of the antiphlogistic treatment, employed by itself. He however recommends that one very large bleeding should invariably precede the adoption of any local applications, or of the excision of the swollen conjunctiva. An impression is thereby made on the system, and the troublesome consequences, which would otherwise be apt to follow the performance of a severe operation on an organ already suffering from a most acute disease, are thus most effectually guarded against. If, contrary to his expectations, this first bleeding be followed by a decided relief to the symptoms, so as to lead him to believe that the disease may be more purely inflammatory than he had imagined, he does not hesitate to repeat it, and to apply at the same time an immense number of leeches in the neighbourhood of the suffering organ, watching the progress of the local disease most carefully all the time. When, on the other hand, no permanent or decided amelioration takes place (and unfortunately this is by far most frequently the case) he proceeds at once to perform the following operation on the affected eye. The eyelids being separated from each other, and everted as much as possible, the projecting ocular conjunctiva is laid hold of with a pair of dissecting forceps, and excised by means of curved scissors. The excision ought to be as complete as possible, all the swollen membrane, as far as it can be reached, being firmly cut out. The discharge of blood is usually very copious. When it begins to subside, the eye is to be wiped clean of the blood and purulent discharge, and a stick of lunar caustic is then to be rubbed freely on the everted surfaces of both palpebræ. The parts should be bathed with tepid water, before replacing the palpebræ. The success of this treatment depends very much on the care which is taken to “cauteriser à un degré convenable la conjunctive

palpebrale." For this purpose the nitrate is to be drawn slowly along the everted surfaces, pressing it chiefly on those points where the membrane is most swollen or granulated. If the membrane is in folds, the caustic should be passed, if possible, in between them, so that no part of the diseased surface escapes its operation. The pain caused by this treatment is, as might be supposed, excessively severe; but it does not remain long. The application of cold water to the eye will be found useful, not only as a sedative to the pain, but also as an astringent to the discharge.

However acute the suffering may be, and it is not unfrequently so great that the young practitioner is alarmed for the consequences, there is in truth no danger. The practice has now been employed at the Hôtel Dieu for some years, and there has not been a single case of mischief having occurred, although the nitrate has been used very freely and boldly. At first M. Sanson had always recourse to general blood-letting after the operation, to guard against the dreaded inflammation; but of late he has quite discontinued this precaution, unless the case required, for other reasons, the use of depletion. The rationale of the treatment by excision and cauterization, as adopted and recommended by M. Sanson, is sufficiently obvious. Part of the morbidly secreting tissue is removed, and the surface of another part is destroyed to a greater or less depth and extent, according to the freedom with which the nitrate has been employed. When the disease is arrested, the cut surfaces of the ocular conjunctiva speedily unite together by cicatrization; and as this takes place before the eschar has become detached from the palpebra, there is little or no danger of any adhesion being formed between the two opposite surfaces of the conjunctival membrane. We adduce two examples illustrative of M. Sanson's practice.

A Polish refugee, 27 years of age, of a strong healthy constitution, had contracted gonorrhœa a fortnight before his admission into the Hôtel Dieu. The gonorrhœal ophthalmia had, at this pe-

riod, existed thirty-nine hours. The eyelids were prodigiously swollen, and very considerably everted. The ocular conjunctiva was so much chemosed, that the cornea could be seen only partially: it was still transparent, not softened, but bathed with the profuse purulent discharge, which irritated the cheek wherever it came in contact with it. The throbbing pain and intolerance of light were extreme. The patient was immediately bled to a large amount; 30 leeches were applied around the affected eye; and appropriate internal remedies were employed. On the following day, the 3d, the cornea was found to be somewhat opaque. The patient was much reduced; the leech-bites had never ceased bleeding for four-and-twenty hours. In the evening of this day, another venesection to the amount of 25 ounces was practised, and a drastic purge was given. On the 4th, the eye was deemed irretrievably lost, the cornea being "*ramollie et plissée*;" next day it burst, and the iris protruded. At this time, although the patient was "*excessivement faible, pale et decoloré*," the other eye became affected with the disease in its most intense form. "*Dans l'espace de quelques heures on voit se developper des granulations extremement nombreuses, lesquelles sont le siege d'un ecoulement très abondant de matières mecoso-purulentes.*"

To recur to depletory remedies was quite impracticable, considering the exhausted state of the patient's strength: "*il aurait inévitablement succombé.*" M. Sanson, therefore, determined to practise the operation of excising the ocular conjunctiva, and of cauterizing the palpebral portion of the membrane. A small quantity of blood was then drawn from the temporal artery, and leeches were applied round the orbit. The intense pain, occasioned by the operation, subsided in the course of a few hours; and the patient then obtained some sleep. On the morrow, "*l'amélioration fut très sensible*;" the tumefaction of the eyelids had subsided greatly, and the purulent secretion was "*complètement tarie.*" Next day, the condition of the eye was altogether much

improved, and the pain had quite ceased. The patient could open the eyelids, and even perceive the objects around him. He gradually recovered the perfect sight of the right eye. The conjunctiva of the left one being still much swollen, and the purulent discharge from it continuing, M. Sanson excised the ocular, and cauterised the palpebral portion, as he had done to the other eye. A smart attack of ophthalmia was the consequence; but the discharge was quite stopped. The inflammation was subdued by appropriate means; and on the fourth day of April the patient was discharged completely cured.

Case 2. A man, 25 years of age, had been suffering from a neglected gonorrhœa, for a period of 15 months. On the first of October, 1834, he began to experience sharp pains in his left eye, which had become red and watery. On the following day, the ophthalmia had greatly increased; and the eyelids were glued together by a most viscid discharge. When received into the Hôtel Dieu on the 6th, both eyelids were excessively swollen: on separating them, a profuse quantity of muco-purulent matter flowed out; the ocular conjunctiva was so much chemosed, that it concealed the greater part of the cornea, which however seemed to be still quite transparent. The patient complained of intense pain in the ball of this eye; the pulse however was not much quickened, nor the pyrexia at all severe. Before his admission, he had been freely bled and purged, with but little relief to the symptoms. As the disease was rapidly making progress, M. Sanson excised the turgid ring or "bourrelet," which the chemosed ocular conjunctiva formed round the cornea, and cauterised freely the inner surface of both palpebræ with the nitrate of silver. The pain from the operation was most severe, and did not subside for several hours. A few drops of a collyrium, composed of two grains of sulphate of copper, two grains of Armenian bole, half a drachm of gum arabic, and ten drops of laudanum to four ounces of distilled water, were to be introduced between the eye-lids occasionally. Or-

ders were given, that if the swelling of the conjunctiva returned, a collyrium composed of six grains of nitrate of silver to four ounces of water, was to be used instead of the preceding one.

The puriform discharge ceased almost immediately, and the pain gradually diminished more and more. On the following day, the swelling of the conjunctiva had abated considerably, and the discharge was very trifling.

The employment of the injections produced much less pain than on the preceding day. On the 9th, the improvement was considerable. The whole of the cornea was now visible, and it was quite transparent. 11th. The swelling of the palpebral conjunctiva having increased somewhat, the collyrium with the nitrate of silver was used. 13th. All the swelling had disappeared, and the patient was pronounced cured. — *De l'Emploi de l'Excision, &c. dans l'Ophthalmie Belenorrhagique, par E. F. Julliard, Paris, 1835.*

The preceding observations make us acquainted with the mode of treatment recommended by M. Sanson in one of the most active and dangerous forms of purulent ophthalmia. Whether the gonorrhœal matter exerts any peculiar influence as a specific poison, or whether, as is more probable, it acts merely as an irritant to the mucous structure of the eye, the surgeon cannot fail to perceive that there is a close and intimate resemblance between the gonorrhœal and some other forms of the disease; and he is therefore legitimately induced to believe, that the treatment most successful in one form will, in all probability, be best adapted to the others. We are inclined to agree with M. Julliard, that the genuine gonorrhœal ophthalmia in most cases, and perhaps always, arises from the direct application of the urethral discharge to the eye, and seldom or never from its mere retrocession. That the discharge from the urethra is often much diminished, and sometimes even totally suspended, when the eye or eyes become affected, is quite reconcileable with what is observed in other diseases. The irritation of the one organ may act as a derivative or

counter-stimulant to that of the other, without any metastasis of the diseased action. Independently of the arguments which our author has adduced in favour of the local origin of gonorrhœal ophthalmia, viz. its extreme rarity in females, the circumstance of it being very generally limited to one eye, and also of the urethral discharge not unfrequently continuing after the eye has become affected, the analogy of the exciting causes of other purulent ophthalmias, such as the Egyptian and infantile, adds much to its probability.

That a purulent ophthalmia may occur in infants, as well as in more advanced patients, from exposure to cold, or to strong light, from the application of various mechanical stimulants, and probably also from certain unknown epidemic influences, we have no intention to deny: but by far the most frequent cause is the direct application of the acrimonious vaginal discharge to the eyes of the infant during labour.

With respect to the cause of the Egyptian purulent ophthalmia, the testimony of Drs. Vetch and Edmonston, and of Mr. McGregor, leaves little doubt that the disease was generally propagated from one person to another by actual contact of the discharge. The late Mr. Ware, a high authority in ophthalmic surgery, has delivered his opinion "that this particular disorder is only communicable by absolute contact; that is, by the application of some part of the discharge, which issues either from the conjunctiva of the affected eye, or from some other membrane secreting a similar poison, to the eye of another person:" and in reference to the gonorrhœal species of purulent ophthalmia, he has stated, "that in the majority of adults, whom he has seen affected, if the disorder had not been produced by the application of morbid matter from a diseased eye, it could be traced to a connexion between the ophthalmia and disease of the urethra." So much for the etiology of purulent ophthalmia. We shall now proceed to the more important subject of the treatment of its more severe forms, and endeavour to shew that the practice of the most experienced surgeons coincides in prin-

ciple with that recommended by M. Sanson in the gonorrhœal variety. This is the more necessary, as we believe that far too many of the surgeons of the present day have very vague and incorrect notions as to the plan which they ought to pursue in treating this and the other varieties of purulent ophthalmia.

The formidable appearance of the affected eye, the extreme rapidity of the disease, and its too often destructive effects, have led many surgeons to regard it as consisting in the most intense inflammation possible of the affected structures; and they have therefore supposed that the only chance of arresting the mischief, is by a corresponding activity in the use of antiphlogistic measures, and more especially of sanguineous depletion. Hence the advice of one author to take away not less than sixty ounces of blood at the first bleeding, and to repeat the operation, in a smaller quantity, at short intervals, until a decided amendment of the state of the eye is visible. But surely this practice is as unsound on theoretical grounds as it has proved to be unfortunate in its results. Inflammation of mucous tissues, especially when attended with an increased flow of their secretions (whether these be perverted in their qualities or not,) requires, as a general rule, less copious depletion than inflammation of any other texture.—Take, for example, some forms of cyanche or bronchitis, dysentery or gonorrhœa: in none of those diseases do we practise so large or so frequent venæsections as in pneumonia, peritonitis, &c.

The vehemence of the inflammatory action is never so great in the former cases; the mucous membranes have a tendency to relieve themselves of the hyperæmic state by an augmented flow of their accustomed secretions; and the conduct of a judicious physician is rather to be guided by Nature, than directly to oppose and thwart the course she points out.

Now if this principle be true of these diseases, it is equally so of the maladies of the eye. Inflammation of its fibrous tissues requires much more vigorous de-

pletion than inflammation of its mucous membranes: and let it be remembered, that it is these membranes which are primarily and chiefly affected in all purulent ophthalmias. But, not to trust to mere theoretical objections, we shall now briefly glance at the course of treatment which has been found most useful in some of the most common forms of the disease: and first of the Egyptian ophthalmia, including that variety which prevailed to such an extent in the Royal Military Asylum at Chelsea, and in other places, about the beginning of the present century, and of which a very admirable account was published by the late Sir P. McGregor. Dr. Vetch recommended that one large bleeding should be practised at the commencement of the disease; but he cautions us against trusting to antiphlogistic remedies alone, however vigorously employed. The use of powerfully astringent and sedative applications to the eye is much insisted upon; and of these he gave the preference to the undiluted liquor plumbi subacetatis dropped occasionally under the eyelids; it diminishes the discharge, lessens the inflammation, and is incapable of doing harm in any stage of the disease. He also praises highly the effects of a strong infusion of tobacco, two drachms of the leaves to eight ounces of water, applied directly to the affected eye.

Assalini informs us that venæsection and emollient applications to the eye were generally inefficacious, and even hurtful in many cases. After purging his patients freely, he introduced into the eye a few drops of a solution of pure potassa, or of the nitrate of silver, to which was sometimes added a small quantity of the acetate of lead. Sir P. McGregor states, "that local applications were found most advantageous." During the early stage he recommended one general bleeding, and a strict enforcement of the antiphlogistic regimen. Leeches were applied in large numbers near the affected organs; but of all remedies he derived the greatest benefit from the ung. hydrarg. nitrat. weakened at first with twice its quantity of lard, and applied by means of a camel-hair pencil. Sometimes the red precipitate ointment, and the quack me-

dicine called the golden ointment, answered better than the nitrated one. Blisters applied behind the ears, or in the nape of the neck, but not near to the eye, were generally found useful. When the inflammation had somewhat subsided, he used a collyrium, composed of the nitrate of silver in water, with the greatest service. Mr. Ware, although friendly to bleeding, never trusted to the antiphlogistic treatment alone. He strongly recommended the use of the aqua camphorata of Bates' Dispensatory, and which consisted of camphor, sulphate of copper, and Armenian bole, dissolved in boiling water. Beer, the celebrated German oculist, has little faith in large depletions of blood. He employs drastic purgatives, nauseating doses of antimonials, and tepid astringent lotions, of which the best is made by dissolving one grain of corrosive sublimate in eight or ten ounces of water, to which a small quantity of vinum opii is to be added.

These authorities are perhaps sufficient to prove that the antiphlogistic treatment, however appropriate and useful it may be, in the early stages of the Egyptian purulent ophthalmia, is not in itself sufficient to arrest the progress of this formidable disease; and that the simultaneous use of powerful local applications ought never to be neglected. The same remark is applicable to the purulent ophthalmia of infants. "Of course," says Mr. Ware, "emollient applications must not be used." On the contrary, astringents and corroborants are immediately indicated, in order to restore to the vessels of the conjunctiva their original tone, and to check the morbid secretion of matter. For this purpose, no application is so beneficial as the aqua camphorata, already alluded to. Dr. Vetch speaks in high terms of the good to be derived from the undiluted liquor plumbi, and the red precipitate ointment. Mr. Guthrie, while he recommends bleeding in violent cases, trusts chiefly to the local application of the nitrate of silver, in the form either of solution or of ointment, to which a few drops of liquor plumbi have been added. It is unnecessary to adduce the opinions of other authors, as they almost uni-

formly agree in expressing the necessity of a vigorous local, as well as of a general treatment.

Analogy therefore leads us to employ similar means in that form of purulent ophthalmia, which is induced by the application of gonorrhœal matter of the eye. The appalling rapidity of the disease demands the most bold and determined practice on the part of the surgeon. A few hours may determine the fate of the affected eye; and we have already seen that even the most active depletion has often failed to prevent the mischief. The severe operation recommended by M. Sanson may not be always requisite; but we quite agree with the principle which directs his treatment. Let the patient be immediately bled to 16 or 20 ozs. A strong drastic should be given: and repeated doses of the tartrate of antimony to induce and keep up a state of constant nausea. These means will be sufficient to keep down all constitutional excitement; but they are not sufficient to prevent serious mischief in the affected organ. To fulfil this most necessary induction, let the surgeon, after syringing away every drop of discharge from the eye, evert the lids, and rub them freely with a stick of the nitrate of silver. A rag dipped in cold water, or a cold poultice, should then be laid over the eye. This simple, but efficacious treatment has proved most successful in our own practice, and we can therefore confidently recommend its adoption. The pain produced by the application of the caustic is generally very severe, and lasts for half an hour and upwards. The matter ought to be washed away with any mild diluent, used tepid, every two or three hours. The caustic may require to be repeated at the end of twelve hours in severe cases; in milder cases the application once in 24 hours will be found sufficient. As the discharge abates, and becomes more thin, the use of the common astringent collyrium, of sulphate of zinc, or of alum dissolved in rose water, should be used frequently with a syringe.

In the purulent ophthalmia of infants, we have adopted a similar mode of treatment with almost uniform success.

When the febrile irritation is great, a leech or two behind the ears, repeated doses of the hydrarg. cum creta, with the nitrate of potass, frequent syringing of the eyes with tepid water and milk, and the daily application of nitrate of silver in substance, to the everted palpebræ, have, in the majority of cases, speedily induced a favorable change in the symptoms; and the cure has been completed by using a mild astringent lotion for a week or two afterwards. Under this treatment the disease is speedily, as well as effectually removed.

ACUTE RHEUMATISM TREATED WITH LARGE DOSES OF THE TARTRATE OF ANTIMONY.

A mason, 34 years of age, was admitted into the Hospital Necker, on the 4th of October, 1833. For some days he had experienced sharp pains in the knees and wrists, with frequent shiverings and headache. The affected joints were red and swollen, the skin hot and dry, the urine high-coloured, the pulse rather frequent. The bowels had not acted for six days.

He was ordered to be bled to 16 ozs. to be purged with sulphate of soda, and to have hot poultices applied over the painful joints. On the sixth, the pains were more severe the elbow and shoulders had become affected; there was general restlessness, and also want of sleep. He was again bled to 16 ozs. and ordered to take "petit-lait emetise." 7th. Blood sisy. The emetic had purged the bowels several times—pains somewhat relieved. On the 11th and 12th the symptoms were much mitigated. On the 13th and 14th the pains returned with great severity—numerous leeches were applied over the affected joints. On the 16th, the disease being still very distressing, and the depletory treatment hitherto pursued, having proved ineffectual, M. Bricheteau determined to give a trial to full doses of the tartrate of antimony: 10 grains were dissolved in sixty ounces of water, and an ounce of poppy syrup added to it. Of this mixture, a large spoonful was to be taken every hour. 17th. The

medicine had purged, but not vomited the patient. The rheumatic pains were much relieved. Medicine to be repeated with twelve grains of the antimonial; and poultices to be applied to the joints. On the 18th and 19th, the patient felt himself so much relieved that he thought he was cured. Slight numbness only was felt in the limbs. The antimonial potion, but with less of the salt, was ordered to be continued. For several days he was so well as to be able to walk out, and his appetite returned with vigour. He imprudently exposed himself to the cold damp air on the 30th, and on the following day, there was an evident relapse of all his sufferings, which were as severe as at the first attack. He lay in bed and could not move a joint, but with pain and extreme difficulty. The antimonial potion with eight grains and with some poppy syrup was immediately ordered. Fortunately the medicine produced no evacuations, either upwards or downwards; the tolerance was complete from the first dose. This was a favorable sign. In the course of two days, the relief was very striking; all pain had ceased, and the tumefaction of the joints had almost entirely subsided.

On the 10th of November, the patient was discharged cured.

Remarks. M. Bricheteau deduces the following two practical inferences from this case. First, that full doses of the tartrate of antimony cured the rheumatic affection, twice successively in the same patient; and secondly, that sanguineous depletion failed even to afford any very decided relief to the disease; an event which he acknowledges to be of rare occurrence, and which he thinks, was probably owing to some peculiarity "de la constitution medicale de la saison." He admits that the use of the antimonial was made at a favorable moment, "parceque la saignée avait echoué, et que c'est particulièrement dans ce cas qu'il convient de recourir à la medication contre-stimulante."

Case 2. A man, 40 years of age, was admitted into the hospital on 17th October. For eight days previously he

had suffered severe rheumatic pains in his knees, shoulders and wrists, which he was unable to move, except with acute distress. The joints were red, swollen and hot. A mixture containing eight grains of emetic tartar, and an ounce of poppy syrup was ordered to be taken in divided doses, every two or three hours. Warm fomentations and poultices were applied to the joints.

18th. The antimonial has not caused any evacuation. The pains are less. The dose of the medicine to be increased to twelve grains.

19th. The pains are exceedingly severe; the patient cannot move in bed, but with great suffering. No nausea, or vomiting. Bowels purged thrice. The pulse has fallen to 52. The dose of the tartrate to be raised to 20 grains.

20th. No evacuation. The state of the joints not improved. To be bled to 16 ounces.

21st. Pains almost entirely removed. Blood drawn very buffy. Pulse softer and more frequent, owing doubtless to the omission of the tartrate. From this date, the amendment was progressive. Slight pains in the shoulders only, and a degree of stiffness of the joints remained. The appetite speedily became vigorous, and the patient was able to leave the hospital on the 28th of the month.

Remarks. In this case the antimonial was administered too soon. The bleeding ought to have preceded its use. The Italian physicians act wisely in employing these two powerful remedies simultaneously; the action of the one appearing to promote that of the other. As a general rule, one or more bleedings should precede the antimonial treatment. The influence of the medicine on the pulse was very marked. The retardation from 86 to 52 during its use, and its speedy acceleration, after its discontinuance, could be attributed to no other cause. This case also proves the perfect safety of the remedy, even when it fails to remove the disease for which it was prescribed. No disturbance of the stomach or intestines was induced.

In the third case, which occurred in a strong, plethoric, middle aged woman,

and in which the usual symptoms of general acute rheumatism were well developed, the antinomial produced, on the first day, vomiting and purging. On the following day, 16th, the tolerance was quite established, and the dose was increased from eight to ten and twelve grains. 17th. Tolerance continues—pains greatly relieved—profuse diaphoresis: antimonial mixture to be continued. 18th. The patient considers herself cured, and is unwilling to take any more of her medicine, which has begun to sicken her. The swelling and pain of the joints have quite ceased—appetite keen. She remained in the hospital another week, to recover her strength, and then was discharged well.

Remarks. This case is interesting, from the decision and promptitude of the therapeutic effects of the antimonial, "*qui a eu seul l'honneur de la cure.*" It is worthy of notice, that the drug exerted its usual evacuating effects as soon as the rheumatism declined, because then, no doubt, "*il n'y avait plus de contre-stimulation possible, ou, si l'on veut, de rapport entre l'entité morbide, et l'action du médicament.*" Few cases of acute rheumatism are so speedily cured, when large bleedings have been employed, as this was; and, fortunately, the weakness which necessarily follows the depletory treatment was avoided in the present case. On the sixth day after commencing the use of the antimonial the patient was able to rise from her bed.

As for any unpleasant effects imputed to the employment of the tartrate in large doses, M. Bricheteau has not experienced them in any of the numerous cases which he has treated with it. In upwards of twenty cases of acute rheumatism, he has used it freely, and almost always with very satisfactory results.

The powerfully antiphlogistic action of the drug in pneumonia is well illustrated by the following brief details, from our author's experience.

The subject of the first case had been bled three times, blistered, &c. The disease was unchecked, and every appearance indicated an unfavourable issue, when the use of the tartrate was commenced. The patient recovered.

In the second case, one venæsection, followed by the use of the tartrate, promptly arrested the pneumonia.

In the third case, the disease had been arrested by four bleedings. A relapse took place, and was speedily cured by the antimonial treatment.

In the fourth and fifth cases, bleeding and the use of the tartrate were simultaneously resorted to, on the first day of the treatment, according to the method followed in Italy—"berceau de la medecine contre-stimulante." The use of the antimonial required to be carried to the extent of 18 grains per diem, and to be persevered in for several days, in consequence of the extreme pertinacity of the symptoms in both cases.

In the sixth case, the antimonial was first employed after bleeding—then recourse was had to bleeding alone; but the state of the patient becoming worse the use of the antimonial was recommenced, and the dose increased to 18 grains in the course of the 24 hours—the effect was most decided and salutary.

The quantity of the tartrate usually exhibited by M. Bricheteau did not exceed from 8 to 20 grains. He never pushed its use to the extent recommended by the Italian physicians. Whenever the resolution of the disease was once fairly established, the medicine was discontinued. "*J'ai été loin de me repentir d'avoir suivi cette marche; et le succes m'a convaincu, qu'en cette circonstance, comme en beaucoup d'autres, il ne faut jamais accabler la Nature de secours dont elle n'a pas besoin.*" The physician, however, need not be afraid of persisting in the use of the medicine, if the symptoms do not yield. No deleterious effects have, in M. Bricheteau's practice, ever followed the antimonial treatment. If the tolerance of the drug is not speedily induced, a few drops of laudanum, added to the mixture, will very generally enable the stomach to retain it. The formula for the mixture which he orders, is five ounces and a half of orange flower infusion, half an ounce of poppy syrup, and the prescribed quantity of the tartrate—the dose, a table-spoonful every hour, or more frequently when the symptoms are urgent.

With respect to the *modos operandi* of the tartrate, Laennec was of opinion that it acted, "*comme excitant de l'économie animale, et du système absorbant en particulier.*" Without denying to this heroic remedy the power of increasing the interstitial absorption, and of resolving in this manner a pneumonic inflammation, we are of opinion that it exerts a very marked action on the organs of secretion, and upon the entire system of the exhalents. At the same time that it eliminates and drives outwardly the excrementitious fluids separated from the mass of blood, it slackens and retards the circulation of this fluid along the sanguiferous vessels. The pulse very often falls 10, 15, or 20 beats, within the first day after the use of the tartrate has been commenced; and it was usually observed, that if, from any cause, it was discontinued for a short time, the pulse very speedily rose in frequency. It is a question open for discussion, whether or not the medicine, when the tolerance is once fairly induced, or, in other words, when no sensible evacuation follows its administration, is absorbed, and carried into the mass of circulating fluid, stimulating the secretory organs, and diminishing the excess of blood in any part which is congested or overcharged.

When the tolerance is not induced, the tartrate evidently acts as a very powerful derivative, by stimulating the stomach, intestinal canal, liver, skin, and kidneys. The effects of the large doses are, then, quite the same as those of the drug exhibited in the small doses, to which Bordeu the elder, Serane de Montpellier, &c. trusted so much in the treatment of pneumonia, as we are informed by Th. Bordeu. As to the evacuations induced by large doses of the tartrate, those from the bowels are usually more severe and obstinate than the vomitings, the lower portion of the small intestines, and the commencement of the colon, being the parts apparently most sensitive to its action. We have already stated that a few drops of laudanum, added to the solution, will generally enable the stomach and bowels to bear the use of the antimonial. When, however, this is not the case, we must discontinue its employ-

ment. The tartrate has been known to induce a congestion and infiltration of the submucous tissue of the bowels, and even a softening of the mucous coat. The lining membrane of the mouth has sometimes become inflamed, and even ulcerated, during the use of the remedy.

Pneumonia and acute rheumatism are the two phlegmasiæ which are most speedily and effectively benefited by the tartrate, given in large doses. Bleeding should generally precede its exhibition at first; but, should this be impracticable, or from any cause unadvisable, recourse may be had immediately to the use of the tartrate. Sometimes the medical constitution of the season is decidedly unfavourable to sanguineous depletion; under these circumstances, the tartrate "*est un moyen précieux.*" The antimonial treatment will be found admirably adapted to country medical practice, where the physician cannot visit his patients so frequently as he may wish, for the purpose of watching the effects of bleedings.—"*Il lui sera possible, par cette méthode, et avec le secours d'une personne intelligente, de regler le traitement d'une pneumonie, ou d'un rhumatisme, pour plusieurs jours apres avoir fait une large saignée, s'il le juge convenable.*" The antimonial medication is very generally well suited to old patients, whose vital powers cannot bear large or frequent depletions of blood, and in whom the mucous coat of the stomach and intestines is not so apt to be irritated by the drug as in younger subjects. The rational signs which indicate success from the use of the tartrate, are the tolerance, or absence of evacuation, being induced after the second or third dose of the medicine—the retardation of the pulse within the first twenty-four hours—moderate diaphoresis, and the feeling of greater general comfort on the part of the patient. The physical signs of an improvement speedily follow. As there are certain medical constitutions, or conditions of climate, season, &c. which contra-indicate large depletions of blood, so there are others "*eminemment phlogistiques, qui interdisent l'emploi du tartre stibié.*" Thus it was most successfully used by me (M. Brichteau) in 1831;

while, towards the close of 1832, and at the beginning of 1833, "il nous devint impossible de l'administrer avantageusement." In the Autumn of 1833, "il nous parut utile de revenir à l'usage de ce médicament."—*Clinique Médicale*, par M. Bricheteau.

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SCENE IN THE FRENCH ACADEMY.—
HOMŒOPATHY.

An application having been recently made to the Minister of Public Instruction, by some homœopathists in Paris, for permission to establish a dispensary and hospital of "clinique homœopathique, pour compléter l'enseignement," the Minister referred the question to the decision of the Academy of Medicine, as one of medical police, and, therefore, involving the public health. The Bureau proposed to nominate a committee, who should examine the claims of the petitioners (*general confusion*.)

M. Maingault rose, to suggest that, for the sake of impartiality, the committee should consist of as many believers as unbelievers in homœopathy (*universal uproar*.)

M. Deneux requested M. Maingault to name the members who believed in the doctrine (*laughter*.)

M. Marc did not see the propriety of having a chemist in the committee, and proposed M. Andral (the son,) who had made some trials of homœopathy, in the room of M. Boullay.

M. Lodibert objected to M. Marc's proposal, and asked who could so well judge of the homœopathic pharmacopœia as a chemist.

M. Andral, senior, exclaimed, with much emotion, "I much doubt whether the Minister has any right to require a report from the Academy on an absurdity. The President should write to the Minister, and expose the cheats and juggleries of these rogues, who call themselves homœopathists. I protest against the appointment of any commission, and, therefore, move the order of the day (*loud noise—the confusion at its height*.)

M. Londe.—Write to the Minister

that they have been tampering with his credulity, and that they Academy cannot condescend to have any thing to do with such charlatans, who will, no doubt, avail themselves of the very present discussion to announce, in tomorrow's paper, that the Academy were engaged with the consideration of the very important subject of homœopathy.

M. Lepelletier.—Yes! homœopathy is, indeed, a very imposture; but here we have an opportunity of exposing and abolishing it. Let us accept the challenge that is offered.

M. Keraudren suggested that an application should be made to some of the German societies, for information relative to the indigenous homœopathists (*exclamations—interruption*.)

M. Marc.—In Germany, homœopathy has fallen into the most utter contempt. A distinguished German professor assured me, the other day, that in Berlin there were only three homœopathists—one rogue and two fools (*laughter*.)

M. Breschet.—I was lately at a meeting of upwards of 600 German physicians and surgeons. Some one wished to discuss the question of homœopathy; but the proposal was rejected with such general disapprobation, that even the bare mention of a subject, which is believed only by quacks and impostors, was immediately scouted.

M. Renaudin was of opinion, that the Academy were bound to obey the request of the Minister, who had proposed for their consideration a question of medical police, and not a problem of science. Several other members took the same view; and, at length, it was agreed to appoint a committee to report.

In order that the public may be able to judge for themselves, of the credibility due to the assertions of the homœopathists, we shall extract from their own journal, the "Bibliothèque Homœopathique," some of the wonderful wonders which the infinitesimal medication has achieved within the last half-year. Dr. Peschier, secretary of the French Homœopathic Society, reports several cases of pleurisy and pneumonia, cured by a single globule of aconitum. The mere cure, however, is the least wonderful part of the history.

The extraordinary rapidity and the infallible certainty of the remedial effects, and then the confident predictions by Dr. P. of the exact moment, at which the happy change from imminent danger to complete recovery would inevitably take place, are events which, in importance and authenticity, can be matched only by the miraculous achievements of the Pope himself, in the most palmy days of Catholic ascendancy. A young lady was labouring under a most violent pleurisy, in the afternoon of —. Dr. P. saw her at half-past 9, p. m. and ordered her “un seul globule aconit,” assuring her attendants, that all the distressing symptoms would be relieved at two o'clock of the following morning, after a previous transitory aggravation. As a matter of course, the aggravation, and then the cure, took place as predicted; and the patient was quite able to resume her domestic duties next day.

But the following case is still more worthy of notice, and indeed is “le plus étonnant que Dr. Peschier a jamais rencontré.” F. B. a mechanic was suddenly seized with a violent hæmoptysis. A venæsection having been practised, without any benefit, Dr. P. was summoned to the man's relief. He found his patient “crachant à pleine bouche le sang dont son vase de nuit était à moitié plein.” Availing himself (we are told) of a short interval between the very frequent attacks of the hæmoptysis, Dr. P. administered “une seule dose imperceptible de granules imbibés d'alcool aconité,” and ordered him to have cold water as a drink, interdicting the employment of any other remedy, either outwardly or inwardly. Four hours afterwards he revisited him, and found that the hæmorrhage had entirely ceased, and that the other pectoral symptoms were greatly mitigated. The aconite having already “à peu près terminé son action,” the pulsatilla was substituted, and so confident was the Doctor in his auguries, that he desired the attendants to place at the bed-side two large jugs of cold water, and leave him, “parce que la nuit serait bonne.” Next morning, this man, whose life had been in the most imminent danger, was

able to get up and dress himself “ne sentant aucun mal, et me demandant la permission de s'aller promener.” In the pride of his triumph, the doctor exclaims “certes, c'est, là une des guerisons les plus rapides, les plus étonnantes dont on puisse entendre parler.” Dr. P. had asked, it seems, some Allopathic doctors, what length of time such a case, as the preceding one, would require for treatment “d'après la méthode de l'école,” and on being told, three weeks at least, he calls on his readers to notice, that “avec homœopathie un jour avait suffi, convalescence comprise.” After such a miraculous feat, it is unnecessary to allude to some minor achievements recorded by Dr. P. such as cases of epistaxis cured by a single drop of a tincture of aconite, “qui opera avec une très grande rapidité.” Two cases of croup, and a case of universal tetanus were strangled at once, by the same all-powerful remedy. The most malignant fevers were almost uniformly cured by aconitum, rhus and nux, while patients treated “avec tout l'appareil de l'allopathie” were falling victims to the disease, in great numbers. The worst cases of erysipelas seldom required more than one dose of belladonna, for their entire removal. Rheumatisms, of many years standing, were charmed away by a hundredth part of a drop of rhus: pains of the bladder, by a similar dose of bryony; the agonies of nephritis, dissipated in a moment, by a spoonful of a mixture, containing one drop of nux in six ounces of water, and the most violent quinsies by a single infinitesimal dose of belladonna. Not satisfied with reducing the whole domain of pure physic to submission, the homœopaths have extended their conquests to more than one department of surgery; and, although they have not yet professed to knit broken bones, or dissolve urinary calculi, without the aid of allopathism, we are assured that contusions, however severe, may be always instantaneously relieved, and very generally at once cured, by fomenting the parts with water, in which one drop of arnica has been dissolved!

III.

CLINICAL REVIEW.

BIRMINGHAM INFIRMARY.

REPORTS OF THE OUT-CASES DURING
THE YEAR 1834.*

THESE reports are two in number—one drawn up by Mr. Parsons, and referring to the cases attended by him; the other by Mr. Ryland, and drawn from his cases. They are chiefly constructed for statistical purposes, and in that

point of view are not devoid of interest.

It appears that Mr. Parsons attended, during the year 1834, 3342 cases, of which 132 proved fatal. The three following tables shew the number of cases and of deaths which occurred in each month, distinguishing those under the age of ten years from those above that age, and distinguishing, also, the males and females.

	MALES.					FEMALES.				
	Under 10 years.		Above that		age.	Under 10 years.		Above that age.		
	Cases.	Died.	Cases.	Died.		Cases.	Died.	Cases.	Died.	
January	43	- 3	95	- 5		45	- 3	152	- 5	
February	35	- 1	92	- 7		41	- 0	145	- 3	
March	45	- 1	70	- 2		38	- 2	115	- 5	
April	29	- 2	80	- 5		43	- 4	140	- 3	
May	43	- 5	73	- 1		40	- 2	117	- 0	
June	35	- 2	83	- 6		40	- 2	111	- 0	
July	27	- 1	77	- 3		29	- 1	123	- 1	
August	37	- 2	62	- 3		39	- 3	144	- 3	
September	47	- 5	74	- 6		37	- 5	110	- 3	
October	38	- 3	61	- 6		32	- 1	139	- 2	
November	32	- 1	81	- 1		44	- 1	108	- 5	
December	33	- 2	71	- 2		29	- 0	118	- 3	
Total	444	28	919	47		457	24	1522	33	

	TOTAL MALES.			TOTAL FEMALES.			OF BOTH SEXES.	
	Cases.	Died.		Cases.	Died.		Cases.	Died.
January	138	- 8		197	- 8		335	- 16
February	127	- 8		186	- 3		313	- 11
March	115	- 3		153	- 7		268	- 10
April	109	- 7		183	- 7		292	- 14
May	116	- 6		157	- 2		273	- 8
June	118	- 8		151	- 2		269	- 10
July	104	- 4		152	- 2		256	- 6
August	99	- 5		183	- 6		282	- 11
September	121	- 11		147	- 8		268	- 19
October	99	- 9		171	- 3		270	- 12
November	113	- 2		152	- 6		265	- 8
December	104	- 4		147	- 3		251	- 7
Total	1363	75		1979	57		3342	132

* Prov. Transactions, vol. iii.

"In the next table, the 3342 cases are arranged according to their occurrence before or after the age of ten years, and in the one or the other sex, but without reference to the period of the year; the proportionate mortality is likewise

given in each instance. I have also added another column, headed thus, 'For 1833 and 1834,' in which is given the proportionate mortality of the cases which occurred in both these years.

	Under 10 years.	Died.	Proportionate mortality.	For 1833 and 1834.
Males	444	- 28	1 to 15,85	1 to 14,51
Females	457	- 24	1 to 19,04	1 to 13,84
	901	52	1 to 17,33	1 to 14,2
	Above that age.			
Males	919	- 47	1 to 19,55	1 to 26,36
Females	1522	- 33	1 to 46,12	1 to 41,45
	2441	80	1 to 30,5	1 to 34,32
	Males.			
Under 10 years . .	444	- 28	1 to 15,85	1 to 14,58
Above that age . .	919	- 47	1 to 19,55	1 to 26,36
	1363	75	1 to 18,17	1 to 20,84
	Females.			
Under 10 years . .	457	- 24	1 to 19,04	1 to 13,84
Above that age . .	1522	- 33	1 to 46,12	1 to 41,45
	1979	57	1 to 34,72	1 to 29,14
	Total.			
Males	1363	- 75	1 to 18,17	1 to 20,84
Females	1979	- 57	1 to 34,72	1 to 29,14
	3342	132	1 to 25,32	1 to 25,11"

From the first table it would appear, what has been formerly, we believe, observed, that more males than females die; and that January and September, the depth of Winter, in fact, and Autumn, are the months most fatal to human life. Were the average of the mortality for the years 1833, 1834, to be assumed as nearly representing the truth, with respect to the value of male and female life, there would be this enormous difference in that of the respective sexes—that one male dies

out of every 26, above the age of ten years, whilst only one female out of 41 is carried off. Probably this great disparity in Birmingham is accounted for, in some degree, by the unhealthy or laborious occupations of the artisans. The mortality, in both sexes, is proportionately greater below the age of ten years than above it.

The two next tables exhibit the frequency, and the proportionate mortality, of chronic bronchitis and of phthisis.

"CHRONIC BRONCHITIS.

	MALES.		FEMALES.	
1st Quarter . .	33	7 died.	48	1 died.
2d Quarter . .	18	0 died.	22	1 died.
3rd Quarter . .	12	0 died.	12	1 died.
4th Quarter . .	22	2 died.	35	2 died.
	85	9 died.	117	5 died.

For 1833 and 1834.

The 202 cases of chronic bronchitis are, to the whole number of cases of disease, as . . .	1 to 16,55	-	1 to 17,14
The deaths, 14, are, to the 202 cases, as . . .	1 to 14,43	-	1 to 15,54
to the whole number of deaths, as . . .	1 to 9,43	-	1 to 10,61
to the whole number of cases of disease, as . . .	1 to 238,71	-	1 to 266,36

In the following two lines I have given the proportion which the deaths from consumption alone bear to the whole number of deaths, and the whole number of cases, which occurred in the two years 1833 and 1834.

The proportionate mortality for the whole number of deaths is, as	1 to 4,64
of cases of disease is, as	1 to 116,53."

The other tables which we shall introduce relate to fever, rubeola, scarlatina, variola, and hooping-cough.

"SYNOCHUS AND TYPHUS.

	MALES.				FEMALES.			
	Under 10 years.		Above.		Under 10 years.		Above.	
1st Quarter . .	17	0 died.	14	1 died.	29	0 died.	22	0 died.
2d Quarter . .	11	1 died.	9	1 died.	10	0 died.	4	0 died.
3rd Quarter . .	13	1 died.	11	2 died.	9	2 died.	21	1 died.
4th Quarter . .	25	3 died.	24	3 died.	40	2 died.	42	3 died.
	66	5 died.	58	7 died.	88	4 died.	89	4 died.

For 1833 and 1834.

The 301 cases of fever are, to the whole number of cases of disease, as	1 to 11,1	-	1 to 14,51
The deaths, 20, are, to the 301 cases, as . . .	1 to 15,05	-	1 to 15,84
to the whole number of deaths, as . . .	1 to 6,6	-	1 to 9,28
to the whole number of cases of disease, as	1 to 16,71	-	1 to 22,994

RUBEOLA.

	MALES.		FEMALES.	
1st Quarter . . .	1	0 died.	7	0 died.
2d Quarter . . .	23	4 died.	28	3 died.
3rd Quarter . . .	10	1 died.	10	1 died.
4th Quarter . . .	5	0 died.	0	0 died.
	39	5 died.	45	4 died.

All these cases occurred under the age of ten years.

The 84 cases of measles are, to the whole number of cases of disease, as	} 1 to 39,78
The deaths, 9, are, to the 84 cases, as	1 to 9,33
to the whole number of deaths, as	1 to 14,67
to the whole number of cases of disease, as	1 to 371,33

SCARLATINA.

MALES.				FEMALES.			
Under 10 years.		Above.		Under 10 years.		Above.	
1st Quarter . .	0 0 died.	1 0 died.		0 0 died.	2 0 died.		
2d Quarter . .	9 1 died.	1 0 died.		8 0 died.	1 0 died.		
3rd Quarter . .	8 2 died.	3 0 died.		12 1 died.	3 0 died.		
4th Quarter . .	6 0 died.	1 0 died.		2 0 died.	1 0 died.		
	<hr/>	<hr/>		<hr/>	<hr/>		
	23 3 died.	6 0 died.		22 1 died.	7 0 died.		

For 1833 and 1834.

The 58 cases of scarlatina are, to the whole number of cases of disease, as	} 1 to 57,62	-	1 to 55,32
The deaths, 4, are, to the 58 cases, as	1 to 14,5	-	1 to 19,
to the whole number of deaths, as	1 to 33,	-	1 to 42,34
to the whole number of cases of disease, as	1 to 835,5	-	1 to 1051,

VARIOLA.

MALES.				FEMALES.			
Under 10 years.		Above.		Under 10 years.		Above.	
1st Quarter . .	10 1 died.	2 0 died.		2 1 died.	0 0 died.		
2d Quarter . .	0 0 died.	0 0 died.		1 0 died.	0 0 died.		
3rd Quarter . .	1 0 died.	0 0 died.		0 0 died.	1 0 died.		
	<hr/>	<hr/>		<hr/>	<hr/>		
	11 1 died.	2 0 died.		3 1 died.	1 0 died.		

The 17 cases of small-pox are, to the whole number of cases of disease, as } 1 to 196,59."

Mr. Parsons presents the brief particulars of four cases of variola after vaccination. In one alone would the disease appear to have been severe; all the patients recovered.

"PERTUSSIS.

MALES.				FEMALES.			
Under 10 years.		Above.		Under 10 years.		Above.	
1st Quarter . .	13 1 died.	1 0 died.		13 2 died.	1 0 died.		
2d Quarter . .	7 1 died.	1 0 died.		9 2 died.	0 0 died.		
4th Quarter . .	1 0 died.	0 0 died.		1 0 died.	0 0 died.		
	<hr/>	<hr/>		<hr/>	<hr/>		
	21 2 died.	2 0 died.		23 4 died.	1 0 died.		

For 1833 and 1834.

The 47 cases of whooping-cough are, to the whole number of cases of disease, as	} 1 to 71,1	-	1 to 51,82
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The deaths, 6, are, to the 47 cases, as . . .	1 to 7,83	-	1 to 11,83
to the whole number of } deaths, as	1 to 22,	-	1 to 24,75
to the whole number of } cases of disease, as	1 to 557,	-	1 to 613,17."

Tables of the cases of constipation, cholera biliosa, diarrhœa, and dyspepsia are added by our author. These, however, possess comparatively little interest. We shall therefore pass them by. But two of the cases of constipation ended fatally. In neither was there any hernia, or sign of internal strangulation. The two patients were men advanced in life, one being 77, and the other 84 years old; they had been bed-ridden for a long time; they suffered very little pain; and their bowels appeared quite insensible to the stimulus of drastic purgatives, and of the

injection, per anum, of large quantities of warm water. Permission to examine the bodies was refused.

We now turn to the shorter report of Mr. Ryland. The total number of cases attended by him is 2721; of these, 1127 were males, and 1594 females—696 of the latter being married, and 177 widows. The total number of deaths is 126; of these, 65 were males, and 61 females. The following table shows the relative mortality of the two sexes at different ages.

	Under 1 Year.	Between 1 & 2.	Between 2 & 10.	Between 10 & 20.	Between 20 & 30.	Between 30 & 40.	Between 40 & 50.	Between 50 & 60.	Between 60 & 70.	Between 70 & 80.	Above 80
Males	4	6	18	2	4	8	3	9	3	6	1
Females	7	4	17	3	7	5	7	3	6	3	0
Both sexes	11	10	35	5	11	13	10	12	9	9	1

The number of deaths in both sexes, below the age of ten years, was equal, and above that age it was nearly so, a result not dissimilar to that obtained by Mr. Parsons. The aggregate of the deaths, below ten years of age, constitutes 4-9ths of the total number.

The number of deaths by fever was 13, five being males and eight females. The following table exhibits their relative ages:

	Under 10	Between 10 & 20	Between 30 & 40	Between 60 & 70	Total.
Males	2	2	1	4	5
Females	5	2	1	1	8
Both sexes	7	4	2	1	13

Fever was very prevalent at Birmingham in the Summer quarter. It chiefly affected the bowels, and occasioned ulceration; for in all the cases

examined after death by Mr. Ryland, ulcers were found in the ileum and cæcum.

"One of the cases, in which ulcera-

tion of the bowels was found, is curious, from the circumstance of the patient dying of hæmorrhage that had its source in the ulcers. John Taylor, æt. 34, shoemaker, was seized with fever on the 4th of November. Under the usual treatment he seemed to be improving rapidly, and began to take nourishment, when in the night of the 16th, he had two large motions, composed almost entirely of blood."

We lately saw a case of fever, atten-

ded with the usual symptoms of ulceration of the mucous membrane of the bowels, in which very frequent hæmorrhage occurred. The patient died, but no distinct ulceration was detected, though the mucous membrane appeared abraded in several parts of the lower extremity of the ileum.

The next table shews the relative mortality of the consumptive patients, with regard to age and sex :

	Between 20 & 30	Between 30 & 40	Between 40 & 50	Between 50 & 60	Total.
Males	2	7	3	6	18
Females	5	2	3	0	10
Both sexes	7	9	6	6	28

One case of death by small-pox after vaccination is recorded. The child, a boy, æt. 5, was vaccinated on the 4th of August, and the vesicle was large and perfect on the 11th. In the evening of that day he became unwell, and small-pox appeared on the 14th. The boy died convulsed on the 20th.

"Perhaps I may here mention a case of absence of the uterus, as it is of rare occurrence. Hannah Mack, æt. 19, servant, was admitted into the infirmary, on the 29th of August, 1834, with peritonitis, of which she died in thirty-six hours. On examining the body, the peritonitis was found to have arisen from the escape of fæcal matter through an ulcer of the ileon. As the girl had never menstruated, I wished to examine the uterine organs, but no uterus could be found. Within the fold of the broad ligament, where the uterus should have been, there was a firm, round, fibrous cord, four inches long and thicker at the extremities than in the middle. To each extremity of this cord, the fallopian tube of the corresponding side was attached, becoming impervious just previous to its junction with it. The ovaries were of the natural size, the fallopian tubes well developed. There was no trace of a

vagina; the external parts below the meatus urinarius were closed by a strong membrane. The body was small, but well formed; the feminine character of the skeleton was marked; there was an unusual quantity of hair on the pubes and in the axillæ; and the mammæ were small, but decidedly formed."

It is not the uterus which would seem to confer the sexual character upon the frame; the ovary appears the important organ. The uterus is merely an organ of relation, a receptacle for the impregnated ovum. The ovarium is to the female, what the testicle is to the male, the centre of the sexual appetite and sexual influence. It would be curious to learn, if that were possible, if this female exhibited any sexual propensities.

In an appendix to the preceding report, Mr. Ryland presents a table, constructed for the purpose of exhibiting the liability of persons, of various ages and of different sexes, to suffer from certain diseases. The females seemed to suffer in a larger proportion than the males; but, as Mr. Ryland justly observes, the greater prevalence of sick clubs for the men may affect the ratio in a material degree. The following is the table referred to.

	Under 10 years.		Between 10 and 20		Between 20 and 30		Between 30 and 40		Between 40 and 50		Between 50 and 60		Above 60.		TOTAL.	
	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.
Bronchitis . . .	54	72	13	12	8	26	15	19	13	19	8	7	4	3	116	1
Chronic Bronchitis . . .	—	—	3	—	3	7	3	20	11	14	14	25	15	34	51	98
Constipation . . .	1	3	4	9	7	6	4	6	2	2	2	4	1	1	23	30
Dyspepsia . . .	—	—	4	9	11	5	8	28	6	22	3	6	7	15	39	133
Chronic Gastritis . . .	—	—	3	23	2	14	1	9	11	11	2	6	—	4	13	63
Paralysis . . .	3	3	9	12	1	1	—	—	2	1	2	11	—	4	5	6
Rheumatism . . .	—	—	1	13	13	12	19	12	12	16	9	6	2	4	67	70
Chro. Rheumatism . . .	—	—	—	1	1	4	10	4	2	1	1	7	4	6	17	29
Synochus . . .	71	49	39	53	12	16	—	—	8	17	3	7	1	7	142	170
	129	127	76	118	58	105	65	110	65	126	43	57	37	74	473	747

Mr. Ryland remarks, that an analysis of the preceding table shews a greater frequency of fever and acute bronchitis, below the age of 20 than above it. But chronic bronchitis and chronic rheumatism increase with the increase of years; and females so affected exceed the males in number, nearly in the ratio of 2 to 1. Such, at least, is the deduction from this table.

Dyspepsia would also appear to af-

fect females more than males. This, indeed, is borne out by common observation, for, in practice, we find the majority of dyspeptics in the former sex. This, probably, is attributable to their sedentary habits.

"In chronic gastritis, or inflammatory dyspepsia, the proportion of females to that of males is nearly as 5 to 1. The largest number of cases occurred between the ages of 10 and 20. Of the three males, 2 were brass-casters; of the 23 females, all were unmarried, 5 were sempstresses, 5 domestic servants, 3 pearl-button makers; and, in almost every instance, the complaint was accompanied by disorder of the menstrual functions, and in most of the cases by amenorrhœa. Of the cases of this disease that occurred between the ages of 20 and 40, several appeared to be referable to the long continued suckling of their children, in which many of the women had indulged."

In the lower class of life, that class from which Mr. Ryland's report is drawn, the abuse of spirituous liquors by women is notorious. A proprietor of a large London gin temple informed us that, for one man who frequented his establishment, there were two or three women at the least. Such is the constitution of the female sex, that at all ages, and in all ranks, it is too prone to yield to the impulse of passion and the gratification of sense.

"Two of the cases of paralysis were instances of palsy of the extensor muscles of the hand and fingers, causing that peculiar dropping of the hand, which is frequently seen in those persons who work much with lead. Both the sufferers were brass-cock founders; and so prevalent is the affection among this class of workmen, that it is familiarly denominated the cock-founder's disease.

I have been at some little pains to seek out the reason of the occurrence of this complaint amongst artizans of the above description, and there can be no doubt that it is owing to the lead, which forms nearly a fourth part of the compound metal of which the cocks are made. The 'drop' of the hand never affects the *casters*, although they are exposed to the fumes of the heated metal;

it occurs only in those workmen who are engaged in the filing and polishing of the brass cocks. During these processes the article is covered with oil or grease of some description, and in order that the workmen may see whether sufficient effect has been produced by his file or his lathe, he rubs off the greasy matter, which is full of small particles of the metal, with the palm of the hand or the wrist, and this is done many times in a minute. It is probable that the presence of the grease materially assists the friction and pressure in forcing the lead through the pores of the skin.

The extensors of the hand and fingers, the supinators of the hand, and the flexors of the thumb, are the only muscles that lose their power. One of the patients referred to in the present report, had a regular attack of lead colic; but it is worthy of remark, that the brass-cock founders very seldom experience any ill effects from the lead, except the dropping of the hands. I have inquired of many men afflicted with the complaint in question, if they had been subject to dyspeptic disorders, to constipation, or to colic, and I have always received an answer in the negative. In painters the colic is far more common than this paralytic affection of the hands; and those who have laboured under the latter, have generally suffered severely from the former disease at previous periods.

One of the cases of paralysis was of that kind called the shaking palsy, or *tremblement mercuriel*; it occurred in an old woman who had formerly been a gilder. This disease is now become very rare in Birmingham, the present improved mode of gilding having done away with the imminent risk of health and life, which formerly attended this branch of manufacture."

We think the desire evinced and the plan adopted by our authors to increase our statistical information highly laudable. These great generalizations are of vast importance, not only in enabling us to obtain accurate general views, but frequently in assisting us in individual cases. General laws being an aggregate only of particulars, are applicable of course to their elucidation.

This terminates Mr. Ryland's report. With it terminates also the clinical portion of the third volume of the Provincial Transactions. We must say that we deem that clinical department meagre, disproportionate to the expectations of the public and the opportunities of the contributors. The Association numbers in its list of members many surgeons of provincial hospitals. Surely they might offer some facts of value, some opinions of interest. They are too supine. To your tents, O Israel, say we.

SIR P. DUN'S HOSPITAL.

I. HYDROPS PERICARDII, &c. &c.

By Dr. R. LAW.

J. Campbell, aged 19, naturally strong and temperate, was admitted into the above institution on the 1st of May, with œdema of the legs and feet—fluctuation in the abdomen—liver enlarged—dull sound in the præcordial region—respiration puerile in all the anterior right side, and in the superior third of the left—heart pulsating freely over a space corresponding with the dull sound—posteriorly, the inferior half of each side of chest gave a dull sound, and afforded no respiration. On changing the position, so as to make the shoulders dependent, the sound became clear where it was before dull. He experiences the *decubitus difficilis*, and breathes easily only when sitting up, or inclined to the left side. He has a dry husky cough, and scanty urine. Some parts of the diagnosis were clear enough; but other parts were not so unequivocal.

"We had now to account for the extensive dull sound in the præcordial region; we concluded this to depend either upon extensive dilatation of the heart, or upon equally extensive effusion into the pericardium. We ought to have remarked before, that the account Campbell gave of himself was, that he had had the influenza a month before we saw him, and not finding himself recovering his strength, and perceiving his legs and feet to swell, he was induced to seek admission into hospital. Up to the period of his being attacked

with the influenza, he had enjoyed perfect health. A dilatation of the heart, commensurate with the extent of the dull sound, would have required more time to develope itself, than consisted with the history of this case. Besides the ordinary pathognomonic signs of dilated heart were wanting, viz. extension of sound beyond the præcordial limits, the sound here being strictly confined within the space which yielded the dull sound on percussion; nor had he the characteristic sharp, short, loud first sound, but a weak, feeble action of the heart, evidently more remote from the surface than natural."

Mercury and diuretics were employed. He mended very slowly. As the ascites diminished, they had opportunities of estimating the size of the liver. He progressed slowly till the 11th of the July following, when he was suddenly seized with weakness, depression of spirits, followed by purpura hæmorrhagica, the gums being soft and spongy. Under tonics the purpura disappeared, and the former treatment being recurred to, combined with tonics, he recovered to a greater degree than could have been anticipated. The pleuritic effusion vanished—and by the middle of October he applied for his discharge. The report then was—"No œdema of legs or feet—no ascites or anasarca—no sign of fluid in the pleura—sound still dull in the præcordial region, but without producing any inconvenience—can lie in the horizontal posture, and sleep comfortably—no cough—can walk briskly without oppression of breathing—general health improved."

The foregoing case is very interesting in many points of view. The severe sequelæ of the influenza threatened life for a long time, and were happily removed by mercurials and diuretics, carried on till the mouth was affected.—After that, the mercurials were laid aside, and the diuretics were combined with tonics. The author has found a liniment composed of volatile liniment, turpentine, and tincture of cantharides, well rubbed over the abdomen and sides of the chest, an useful auxiliary to the above-mentioned plan of treatment, in removing effused fluid from the cavities.

II. EFFUSION INTO THE PERICARDIUM AND PLEURÆ.

Lætitia Green, aged 13 years, was seized with scarlatina in the hospital, leaving a dry hard cough and dyspnœa, obliging her to sit up in bed. She complained of distressing palpitation—face bloated—lips livid—feet œdematous—pulse 96, and pretty full.

"Percussion anteriorly yielded a clear sound in all the right and in the superior two-thirds of left side; posteriorly the sound is clear in the superior two-thirds, and dull in the inferior third of each side. In the præcordial region, or the anterior inferior left third, there is palpable fulness and dullness of sound. Although the respiration is distinct in all points when the sound is clear, still it has a peculiar short, abrupt character, as if the vesicular structure of the lung could not expand itself, or open for the reception of the air. When the sound posteriorly was dull, respiration was absent; but these phenomena disappeared on change of posture. On placing the patient on her hands and knees, with the body sloping, clearness of sound and distinct respiration took their place. We thus had the assurance, that it was upon fluid effused into the pleuræ they depended, and that this fluid was not prevented by adhesion from obeying the laws of gravitation."

The heart beat strongly, and with a marked "*bruit de soufflet*"—the bruit being most distinct in the left side. After much reasoning and some doubt, they came to the following diagnosis:—"Effusion into the cavity of each pleura, and into the pericardium, the result of pericarditis." Diuretics, digitalis, &c. were exhibited internally, and the liniment before alluded to was applied to the chest. These were continued from the 25th of May till the 9th of June, when the countenance appeared to be much improved—the swellings of the face and feet gone—decubitus facilis—cough nearly well—pulse 54—fulness still in the præcordial region—"the *bruit musical*, exactly resembling the chirping of a young bird, had taken the place of the *cidevant* "*bruit de soufflet*."

Tonics were now combined with the diuretics.

"June 16. Pulse 84, full, firm, and regular; bruit musical, very distinct; on examining the posterior region of the chest we heard as distinct bruit de soufflet through all this region, as we had ever heard it under its most striking and unequivocal character in the præcordial region; it prevented us hearing the respiration. It occurred to us to make the patient suspend her breath for a few moments, which when she did, the phenomenon completely disappeared. We directed the attention of several experienced stethoscopists to the case, and after they had made their examination, asked their opinion as to the sound and its cause. All regarded it as an unequivocal bruit de soufflet, dependent upon an affection of the heart. Their surprise was great when they found that stopping the respiration caused it to vanish. We have here an interesting example of the manner in which diagnostic signs which are usually to be depended upon, may sometimes deceive us. Had the respiration retained its physiological relation to the circulation, the error could not have been committed; but in the case in question this relation was lost, and the respiration and pulse were nearly equal in point of number. Our patient amended steadily, and found herself so well on the 10th of July, that she applied for permission to leave the hospital. Report on that day:—no bruit de soufflet, nor modification of it in the præcordial region; fulness in the region, quite gone, nor does the dull sound exceed its normal limits; the respiration posteriorly still retains its peculiar resemblance to bruit de soufflet, but is heard much more inferiorly; cough quite gone; no œdema of feet even at night; she can go up stairs without feeling the least distress of breathing."

The termination of the case convinced Dr. Law that effusion into the pericardium, apparently the result of pericarditis, was the cause of the phenomena.

III. PERICARDITIS FROM RHEUMATISM.

In this case the patient had been

freely bled, and taken vin. colchici. A translation suddenly took place to the heart.

"July 11th. *Present symptoms*; pulse 90, regular, full and strong; skin hot; respiration hurried, irregular, (*entre-coupée*) and panting; heart's action apparent to the eye; percussion yields a dull sound in the præcordial region, and even beyond it, both transversely and from above downwards; elsewhere the sound is quite clear. The stethoscope, applied to the space marked by the dull sound, recognizes a violent action of the heart, but so tumultuous and confused, that the different sounds of the organ cannot be distinguished."

He was bled to 16 ounces—leeches were applied to the cardiac region—and calomel, opium, antimony, and digitalis were given every three hours. By these means the violence of the complaint was broken—but the recovery was slow, and a distinct bruit de soufflet was left for some time. When this disappeared a strong impulsion remained, to which the patient became accustomed. It is clear, from this and many other cases, that the "bruit de soufflet" is not always indicative of a narrowing of passages through which the blood rushes. It is very probable that it sometimes is produced by pericarditis. There is no doubt also, that violent actions alone of the heart will produce the phenomenon for a short time. Of this we have seen several examples.

IV. Some account is given of a case where the aortic vales were suspected to be defective. The patient was a labourer, 38 years of age, and habitually exposed to atmospheric vicissitudes. His symptoms, when admitted, were dulness of sound in the præcordial region—strong impulse of the heart—bruit de soufflet—pulse 84, full, strong, and vibrating—pulsation of various arteries visible—hard, dry cough—respiration distinct in all parts of the chest, except where disguised by the heart's action—palpitation when lying on the left side, cough when on the right—palpitation comes on every night at ten o'clock, obliging him to sit up—complexion pale and sallow—no œdema—

subject to epistaxis. He was bled to ten ounces, and much relieved by the loss. Camphor, digitalis, and prussic acid were given, under which he so much improved as to be able to leave the hospital; but he soon returned, with the action of the heart so violent as to make the whole bed shake. The dyspnoea was also very distressing. He was again bled, and superacetate of lead with opium was given, together with other medicines. The changes were insignificant, and not noted down always. After a time a strong abdominal pulsation, attended by a well-marked "bruit de soufflet" took place. There was no tumor perceptible, nor tenderness on pressure. They came to the conclusion that these phenomena were of a nervous character, and gave him tonics with antispasmodics and improved diet. Under this plan the abdominal pulsation nearly disappeared—the bruit entirely. He left the hospital—but they learnt that he died in about a month afterwards. There was something more therefore than nerves in the case.

Some remarks are appended by Dr. Law on that curious and puzzling phenomenon—epigastric pulsation; but nothing satisfactory is elicited. For our own parts, we think it always depends on action of the heart, and not of the arteries.

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BIRMINGHAM EYE INFIRMARY.

ANNUAL REPORT OF THE BIRMINGHAM INFIRMARY FOR DISEASES OF THE EYE. By R. MIDDLEMORE, Esq.

This report is contained in the third volume of the Transactions of the Provincial Medical and Surgical Association. Its author, Mr. Middlemore, is known as an active and zealous observer of diseases of the eye, and the profession are indebted to him for several valuable contributions on the subject.

The cases that have occurred at the infirmary within the year are as follow:

Simple acute conjunctivitis, 236.

Chronic conjunctivitis, 126. Acute conjunctivitis, with pustules on the conjunctiva, 105. Acute conjunctivitis, with pustule or ulcer of the cornea, 112. Acute conjunctivitis, with puriform secretion, 75. Purulent conjunctivitis of newly-born infants, 33. Irritable conjunctivitis, 36. Strumous conjunctivitis, 78. Pterygium, 9. Corneitis, 24. Vascularity of the cornea, 10. Opacity of the cornea, 123. Staphyloma of the cornea, 13. Impaction of foreign bodies in the cornea, 23. Simple acute scleritis, 5. Rheumatic scleritis, 9. Affections of the membrane of the aqueous humor, 11. Simple acute iritis, with or without ulcer or opacity of the cornea, onyx, or hypopium, 59. Chronic iritis, 7. Syphilitic iritis, 3. Strumous iritis, 8. Arthritic iritis, 2. Pro-lapse of the iris, 7. Fungus from the iris, 2. Cataract, 29. Dislocation of the lens, 11. Choroiditis, 4. Retinitis, 4. Glaucoma, 8. Hydrophthalmia, 1. Suppuration of the eye-ball, 4. Atrophy of the eye-ball, 4. Fungoid, and various anomalous tumors of the eye-ball, 2. Amaurosis of various kinds and degrees, 110. Diseases of the lachrymal caruncle and semilunar membrane, 4. Diseases of the lachrymal passages, 23. Epiphora, 10. Strabismus 7. Tinea, 91. Lippitudo, 17. Hordeolum, 8. Ectropium, 2. Entropium, 6. Inflammation of the eye-lids, 13. Œdema of the eye-lids, 6. Ptosis, 5. Ulceration of the eye-lids, 8. Adhesion of the eye-lid to the globe, 4. Tumors in the eye-lids, 28. Wounds of the eye-ball and its appendages, 39.

The affections singled out by Mr. Middlemore for notice are development of the cornea—opacity of the cornea—staphyloma—cataract—amaurosis—and, lastly, acute inflammation of the semilunar membrane and lachrymal caruncle.

I. Development of the Cornea.

"When the cornea is small from birth, it usually happens that the other parts of the eye exist in a correspondently diminished size. This defect I have often witnessed; and since the publication of my last Report, I have

also seen two instances in which the cornea was scarcely at all developed, the other parts of the eye being apparently perfectly formed. I have also seen two examples of undue development of the cornea. The first of these examples is thus referred to in my printed Introductory Lecture: 'I have lately seen a young man from Bloxwich, suffering from a most extraordinary development of the left cornea; though retaining the most perfect transparency, it is increased to nearly treble its natural size; the iris has augmented in a corresponding degree, so that the anterior chamber is amazingly ample. The other parts of the eye are not at all enlarged. But the fact to which I am desirous of directing your particular attention, is the occurrence of the same disease in the opposite cornea. When I first saw this person, the right cornea was not at all enlarged, but it is now evidently increasing, and will soon, I fear, become as large as the other, at least, unless something be done to prevent it.'

In the second example, the disease occurred after small-pox, in an infant, a patient of my friend Mr. Palmer, who requested me to see the case. The right eye is quite healthy. The cornea of the left eye is much increased in extent, its diameter being at least twice as great as that of the opposite cornea. Its texture is apparently healthy, and quite transparent; the anterior chamber is very ample, and the iris is placed at a considerable distance from the neural surface of the cornea. The humours of the eye are somewhat cloudy. If the left cornea continues to increase in size, and if a morbidly increased development occur in the opposite cornea, and which the use of iodine and mercury, and the employment of counter-irritation, should fail to arrest, I shall recommend *from experience of its utility* in such cases, the removal of a central portion of the much enlarged cornea, as a means of preventing the loss of vision in the eye last affected. This is the only mode of destroying the sympathy which exists between these parts under this condition of disease, with which I am acquainted." 374.

II. Opacity of the Cornea.

Mr. Middlemore is of opinion that the frequency of the occurrence of opacity of the cornea is a proof either of the neglect of patients, or of inefficient treatment on the part of the practitioner. There are some points connected with the history of corneal opacity, which he thinks have been insufficiently explained. He observes that when the clearness of the cornea is slightly impaired by the existence of chemosis around its margin, the secretion from the cellular web, which connects together its lamellæ, becomes turgid; and if the original malady continue, interlamellar lymphatic deposition takes place, and, presuming that the prior affection is then remedied, the cornea remains opaque; there remains, in fact, a slight form of diffused onyx. After some severe fevers, and in that prostrate condition of the system which is produced by the malignant cholera, or which remains after copious hæmorrhages, a similar state of things has been remarked; and it will be remembered, that it is a preliminary state to the sloughing of the cornea and suppuration of the eye-ball, when the nutrition of the globe has been interfered with by the division of the fifth pair of nerves.

In many instances of this diffused interlamellar deposition, the transparency of the cornea is entirely restored by the adoption of very simple measures, the opaque substance being gradually removed. But if the cause which gave rise to the interlamellar deposition continues in operation, ulceration, staphyloma, or sloughing of the cornea may be looked for, in consequence of the interruption occasioned to the nutrition of the corneal lamellæ.

"If a thin layer of inflammatory (lymphatic) deposition exist between the corneal lamellæ, it will produce a dirty bluish-white appearance, such as is often witnessed in the light form of *opacity of the cornea*; and it is to this condition of disease that the following plan of treatment is more particularly adapted. Let a camel hair pencil be dipped in a solution of the sulphate of cadmium (one grain to two ounces of

distilled water) and applied to the cloudy part of the cornea three or four times a day.

This application produces very little uneasiness; and I have not observed that it inflames the eye, or produces any of those unpleasant effects which sometimes follow the use of the oxymuriate drops. I do not usually advise the solution to be used until the cornea is *entirely* removed: and I think it unnecessary to continue its use after indications of its *commencing* disappearance are unequivocally manifest.

When opacity of the cornea results from loss of its lamellar texture, the preceding treatment is of course inert. The insufflation of calomel, &c. recommended by Dupuytren and other French surgeons, has proved in Mr. Middlemore's hands unsuccessful and irritating. A weak solution of the oxymuriate of mercury is a common and a good application, if not too early used or too long continued. The point is to avoid producing inflammation, to which the eye affected is prone.

III. *Staphyloma.*

"Geo. Rhodes, æt. 2, has a very large globular staphyloma of the right eye, consequent on purulent ophthalmia. The surface of the tumour is round, smooth, and very vascular; the eye-ball is much enlarged, but is not the seat of much pain and irritation. The eye has been tapped on several occasions, and various remedies have been tried, but fruitlessly tried, with the intention of checking its growth.

Operation.—I removed a portion of the staphylomatous projection (with Beer's knife and the hooked forceps) rather less in extent than the cornea in its natural state.

Treatment.—A roller was passed round the eye after the operation, and the nurse was directed to keep that part of it which covered the eye wet with cold water. The child to have a little of the syrup of poppies.

Result of the case.—A good deal of swelling of the lids, and tension of the globe, occurred a few days after the operation; but they soon subsided, and

the eye-ball is now reduced to its ordinary size.

I have made a preparation of that portion of diseased cornea I excised, and it very well displays the usual circumstances which constitute the pathology of staphyloma of that texture. The cornea is enormously thickened, and is very vascular; the vessels which lead to its organization pass through it irregularly, without any definite arrangement; some of them shoot through its entire texture; but the major part of them ramify as a dense net-work upon, and immediately beneath, its surface. Its lamellar arrangement is totally destroyed; so that its layers are consolidated and cannot be moved upon each other, as in their normal condition. The iris is firmly adherent to the neural surface of the cornea, it is intimately connected, almost identified with it, and is torn or separated so as to possess a reticulated appearance, in consequence of the extension of that texture to which it was attached before it became materially increased in extent."

Mr. Middlemore remarks that this was an example of *globular* staphyloma, in which the eye attains a larger size, and gives rise to infinitely less irritation than it does in the *conical* variety. He is firmly convinced that had he adopted the usual mode of removing this large staphyloma by excising a great part of its anterior surface, very severe symptoms would have resulted. The disease is cured, not by the mere diminution produced by, and in correspondence with, the size of the part removed, but by the occurrence of atrophy as a consequence of the operation. The principle, therefore, to be kept in view, in the adoption of our remedial measures, is the production of atrophy without the extensive removal of parts by a surgical operation.

IV. *Cataract.*

"I shall briefly describe," says Mr. Middlemore, "my usual plan of operating upon children from one to three years old, suffering from complete congenital cataract. I have the pupil fully dilated by the use of a strong solution

of hyosciamus: the child's body securely enveloped in a napkin, with the arms fixed to the sides; and the child placed upon a table of a convenient height, with the head slightly raised. The head is firmly fixed by an assistant, by pressing the hands on either side of it. If operating upon the right eye, I raise the upper lid and steady the eye-ball (*not by means of a speculum*) by pressing the index finger upon the temporal, and the middle finger upon the nasal side of it. I then *rapidly* pass a very fine needle* through the cornea, near to its junction with the sclerotica, and simply lacerate the capsule by slightly moving its point a little backwards, and to either side.

The advantages of this mode of operating are neither few nor unimportant. In the first place, it is quite efficacious, quite competent to the removal of the disease, or, at least, only requires to be performed a second time; secondly, when properly performed, it involves no risk of injuring any important texture, except the cornea; thirdly, it gives rise to scarcely any pain; and fourthly, it excites hardly an appreciable amount of inflammation."

Mr. Middlemore denounces the speculum as equally painful and injurious in its operation. He cites the opinions of his professional friends in favour of the method he adopts.

V. Amaurosis.

Mr. Middlemore earnestly entreats his brethren to test the effects of strychnia in amaurosis. With those effects he is amply satisfied, and he appears a warm and experienced advocate of the value of this remedy. Yet he thinks that it has been employed in an indiscriminate manner, and he feels convinced that all who employ it with judgment and with care, will form the same conclusions of its qualities as he has done.

* The needle should be very fine and slender, sharp *at* the point, a little flattened *towards* the point, having a cutting edge on either side for a short distance *from* the point, and gradually becoming round towards the handle.

VI. Acute inflammation of the Semilunar Membrane and Lachrymal Caruncle.

"A girl, about twelve years old, came to the infirmary, with a very considerable enlargement of the semilunar membrane and lachrymal caruncle. The enlarged parts were very red, but scarcely at all painful. She could give no account of the cause and progress of the complaint, which was, however, soon removed by the application of leeches near the inner canthus, and by free and frequently repeated scarification. As this young person was recovering, her sister applied to me with a precisely similar condition of disease, which, it appeared, had existed for about a month; during which time she had, with the approbation of her medical attendant, been under the care of a cobbler of this town, who had put into her eye, every day, a *dark-coloured ointment*, with the assistance of a *knitting-pin*. This case was also relieved by the plan of treatment which was so successfully employed for her sister. But it is somewhat remarkable (it may, perhaps, be a consequence of the improper treatment she underwent, combined with the longer duration of the disease) that the semilunar membrane and lachrymal caruncle remain in a state of enlargement, which, I apprehend, nothing short of a surgical operation will remove."

This concludes the report, with which we have but one fault to find—its brevity.

GLASGOW INFIRMARY.

DR. MACFARLANE'S REPORT ON TUMORS OF THE ABDOMEN.*

In the clinical department of the last number of this Journal, we presented an account of part of an extended report on tumors by Dr. Macfarlane of Glasgow. The report in question occupies sixty pages of that gentlemen's volume of clinical reports. The first

* Clinical reports, &c. By. J. Macfarlane, M. D.

half is devoted to tumors of the head and neck, and tumors of the mamma. That has been already brought before our readers; the last half of the report (about thirty pages,) is occupied with observations on, and cases of tumors of the abdomen, and to this we shall now direct attention.

Previously to entering on this interesting subject, we may make a remark with reference to tumors of the mamma. This organ is occasionally affected with morbid alterations in the male. We have seen one instance of scirrhus of the male mamma, and we lately heard of another. A month or two ago, we saw a case rather curious in some of its features. A gentleman who had never, so far as he knew, been affected with primary symptoms, had ulceration of the throat and an eruption, exhibiting all the characters of the syphilitic lepra. Soon after this, he got chronic inflammation of the testis, and soon afterwards ulcerations of the mucous membrane of the rectum. About this time, one mamma became much enlarged, very hard, and extremely painful upon pressure. We put him on a course of calomel and opium, and the morbid enlargement of the breast subsided, along with the syphilitic symptoms.

We have frequently seen chronic inflammation of the testis, in connexion with secondary symptoms, especially with those of a cachectic kind; but we never previously observed an affection of the mamma in such circumstances. But the mamma and the testis may be looked on, we imagine, as organs presenting some analogies of structure, and at all events, the proper glandular tissue is, in both, mixed up with much fibrous texture.

We now revert to—

TUMORS OF THE ABDOMEN.

It might appear, *à priori*, that the diagnosis of tumors of the abdomen would be simpler than that of morbid changes of structure in the thorax, for the soft and yielding parietes of the former might seem well calculated to present facilities of examination, denied by the

bony walls of the latter. Yet experience does not confirm this natural expectation. The functions of the heart and lungs are more determinate and distinct, and the means of ascertaining their operations are, thanks to auscultation, more precise than is the case with respect to the viscera of the abdomen. The circumstances that interfere with the appreciation of their disturbances of function and of structure, are well pointed out by Dr. Macfarlane. We draw attention to them, because we have seen so many and such glaring errors committed, in the diagnosis of abdominal tumors, that the necessity of being acquainted with all that is ascertained upon the subject, ought to be made apparent to all who would wish to practise the profession with credit and advantage.

“It is well known (says Dr. Macfarlane) that, in a state of health, certain viscera are contained in certain regions of the abdomen; but, when we consider that many of these are but loosely attached, and may, both in health and disease, be considerably removed from their natural position, we perceive how cautious we ought to be in affirming, because a tumor exists in a certain region, that it is always, or necessarily, connected with the viscus which that region naturally contains. When the external characters of such tumors are obscure and inconclusive, we are told that the function of the affected organ will be always so much deranged as to enable us to establish a satisfactory diagnosis. This is by no means the case,—tumors having been often met with in the epigastric and umbilical regions, unaccompanied by any clear or satisfactory symptoms, but which were found, on dissection, to depend on organic diseases of the stomach. Were we, therefore, to recognize a large globular tumor below the umbilicus, we might be apt to conclude that, from whatever part it originated, its low position, and the absence of symptoms indicating an affection of the stomach, distinctly showed that this viscus was not involved. But again,—we know that the stomach often descends considerably into the abdomen;

and that, on this account, tumors attached to it have, from their depending position, been mistaken, not unfrequently, by experienced practitioners, for other diseases,—a case of which is mentioned by Dr. Monro. There are also several interesting cases of large tumors of the stomach occupying different regions of the abdomen, detailed by Dr. Seymour, in the fourteenth volume of the *Medical and Surgical Transactions of London*. In some of these, the absence of well-marked symptoms, and the unusual size and situation of the tumors, did not lead to a suspicion, that the stomach was implicated, until this was ascertained by dissection. The pyloric orifice was the part affected, and the tumors presented the malignant characters of the encephaloid disease.

The difficulty is still farther increased, because, in all the artificial divisions of the abdomen, there is situated, not a single organ, but a variety of parts—in any one of which the tumor may be situated. If it exists in the centre of the abdomen, it may arise from the peritoneum, the omentum, the intestines, the mesentery, the stomach, &c.; if in the hypogastrium, from sources not less numerous and obscure. There is not, in fact, a more difficult and uncertain part of medical practice, than to distinguish between the different tumors daily to be met with in the abdomen, or to obtain any thing like conclusive or satisfactory evidence as to their origin and connexions. It is this uncertainty of diagnosis, so generally felt and acknowledged, that renders the question regarding the propriety of surgical interference so interesting and important."

There are few in extensive practice—none who have spent much time in hospitals, to whose recollection illustrations of the difficulties, pointed out by Dr. Macfarlane, will not occur. Dr. Macfarlane's chief object, in relating the cases we shall now detail, is to shew the dangers attendant on the operation of gastrotomy. But this question is, to our minds, of less importance than the object of pointing out to practitioners, the various modes in which their diagnosis may be rendered fallacious.

Cases are of great value in diminishing difficulties of this description, for the mind, being aware of errors that have occurred, is on its guard against their commission again.

Our author divides his subject thus. He considers—

- 1st, Tumors confined to the abdominal parietes.
- 2nd, Tumors depending on disease of the peritoneum, omentum, or mesentery.
- 3d, Tumors arising from alvine concretions; and,
- 4th, Ovarian Tumors.

I. TUMORS CONFINED TO THE ABDOMINAL PARIETES.

Such tumors are not very rare, yet no good account of them exists, at least we have not seen any. We have witnessed, however, some signal blunders made as to their nature.

CASE. 1—*Cystic Sarcoma of the Abdominal Parietes.*

H. M. æt. 4, admitted Oct. 11, 1831. There was situated in the right inguinal region, and extending downwards in the direction of Poupart's ligament, a prominent ovoid tumor, about four inches in diameter. It felt firm towards the margin, which was ill-defined, but was tuberoso on the surface, and in several places so elastic as to resemble a collection of cysts containing fluid. It was freely moveable over the subjacent parts, but was firmly and intimately fixed to the integuments, which at one point had a blueish colour. When first observed, at birth, it was about the size of a field-bean, but did not increase much till about nine months before he was brought to the Infirmary, after which it became the occasional seat of pain.

The tumor appeared to be partly solid, partly fluid, and was evidently seated in the abdominal parietes. Its extirpation was, therefore, resolved on, and soon afterwards performed. The wound healed after a partial suppuration, and the boy was dismissed on the 14th of November.

The tumor was found to consist of

an assemblage of cysts varying in size from a filbert to a pea. Several of the most superficial communicated with each other, and presented a honey-comb appearance; but, more deeply seated, each cyst was entire, and apparently separated from its neighbour by cellular tissue. They were covered externally by a fibrous, and lined internally by a smooth, serous membrane, and filled with a dark-coloured fluid.

"This variety of tumor, (says Dr. Macfarlane) is met with more frequently in some parts of the body than in others; and in advanced life it occurs more frequently than in youth. It is unaccompanied by pain, and the integuments placed over it retain their natural colour until the fluid is close to the surface, when a slight blue tinge is observed. It is, in general, easily removable by operation; and there is almost no risk of its reproduction. When there is only one cyst, and that one is small in size, the disease may be cured by evacuating the fluid, and producing inflammation and cohesion of the secreting surfaces; but, when the tumor is large, or is composed of several cysts, the complete removal of the diseased mass by the knife is always necessary. I have seen severe local inflammation and high constitutional excitement produced by puncturing such tumors, with a view to their cure by inflammation or suppuration; and I would deprecate this practice, as less certain in its effects, and more hazardous to the patient, than that of simple extirpation.

With the exception of the ovaries, there would seem to be a greater tendency to the formation of encysted tumors in the cellular texture than in any of the other tissues of the body. Were the cells of this texture to become obliterated by adhesion or otherwise, the natural serous secretion may probably be so gradually augmented as to form a distinctly encysted tumor; at least, I have seen more than once appearances which rendered this supposition by no means improbable. The same explanation may also hold good in many of those cases in which there exists

a congeries of cysts, distinct from or communicating with each other."

Dr. Macfarlane makes a remark upon chronic abscesses of the abdominal parietes, to which we would direct attention.

Chronic abscesses, he observes, sometimes form between the layers of the abdominal muscles, or immediately exterior to the peritoneum. When these are large and ill-defined, it is hardly possible to determine, until the matter approaches the surface, whether the tumor is situated in the parietes, or arises from some of the deeper-seated parts within the cavity of the abdomen.

We have witnessed eight or ten instances of chronic abscess, situated in some part of the abdominal parietes. The majority of those cases were misunderstood prior to a late period, and advanced stage of the complaint. A discussion on this subject took place lately at the Westminster Medical Society. The junior Editor of this Journal related to that body the particulars of several cases he had seen. In one, the seat of the collection of matter was found, on dissection, to be the cellular tissue between the peritoneum and the transversalis muscle; in another, it was between the internal oblique and transversalis, whilst, in the rest, either an examination after death was not obtained, or, if obtained, was unsatisfactory.

We have seen these abscesses point in the loins, at the side of the abdomen, in the groin, and over the outer abdominal ring. Some of the patients thus affected have died, others, perhaps the majority, have recovered. The last example of this not very unfrequent affection that occurred to us was in the person of a gentleman, of some eminence in the musical world. The abscess, in this instance, was seated in the left iliac region. A physician of some eminence had been in attendance, and had no conception that an abscess of the abdominal parietes existed. An opening, however, showed that this was the fact. The patient was extremely ill, but he rallied, and was sent into the country for the benefit of change of

air. We are unacquainted with the result, if, indeed, a termination has arrived.

The next kind of tumor of the abdominal parietes to which Dr. Macfarlane draws attention, is one of an encysted kind.

CASE 2.—Encysted Tumor of the Abdominal Parietes—Puncture—Peritonitis—Death.

A woman, æt. 40, had the middle and inferior regions of the abdomen occupied by a smooth, firm, globular tumor, of great size. It had existed for two years before she applied to a surgeon; but she could not point out the situation in which she first observed it, nor give any satisfactory account of its progress. An obscure feeling of fluctuation existed in the centre, which projected in a somewhat conical form; and the integuments were so tense, and the boundaries of the tumor so ill-defined, as to render it impossible to obtain a knowledge of its connexions. It was the frequent seat of acute pain; and, as it increased in size, it appeared by its bulk and pressure, to impede the action of the bowels, and give rise to frequent attacks of colic. Very contrary opinions of the nature of the tumor were entertained; but it was punctured with a trocar, and several pints of fluid, of the colour and consistence of mucilage, were evacuated. Peritonitis supervened, and proved fatal in five days. On dissection, the fluid was found to have been contained in a large cyst, formed internally by the peritoneum, and externally by the abdominal muscles.

Dr. Macfarlane is of opinion, that an earlier puncture would have been attended with less danger. This is probably correct. He alludes to, and condemns, the practice of employing a stimulating injection, recommended by M. Lisfranc. The practice is too hazardous to be followed, without mature reflexion, by any prudent surgeon.

Abscesses, as Dr. Macfarlane observes, frequently form in the iliac regions, enlarge slowly to a great size, and, in the female, are occasionally mistaken for ovarian tumors. The diag-

nosis is often obscure. M. Dupuytren, as our readers will remember, has published a considerable collection of cases of abscess in the right iliac region; in this, it is not very unfrequently connected with the lodgement of a foreign substance in the cæcum. The following is a characteristic case.

CASE 3.—Chronic Abscess in the Right Iliac Fossa, bursting externally—Artificial Anus—Death.

Mrs. A. æt. thirty-eight, complained for several months of a dull pain in the right iliac region, before any swelling or constitutional derangement was perceptible. A tumor was by-and-bye discovered, which appeared deeply seated, was smooth and firm to the feel, and without fluctuation. It continued for six months without undergoing any perceptible change; but her strength began to decline, and the countenance to assume a sunk and haggard appearance. She had now frequent attacks of pain in the belly. The pulse was accelerated, the bowels were irregular, the stomach irritable, and, as the tumor advanced, the right leg became œdematous. Soon after the commencement of these symptoms, fluctuation was indistinctly recognized in one part of the tumor, which now filled the iliac fossa, extended considerably above the crest of the ilium, as also backwards to the spine, and projecting about two inches beyond the level of the surrounding parts.

Dr. Macfarlane was uncertain whether the tumor was occasioned by an encysted disease of the ovary, or a chronic abscess. He proposed a cautious puncture. The patient refused to submit to this—pointing, and ulceration of the integuments ensued—an immense discharge of pus took place—in three days afterwards, fæces and flatus were discharged through the opening—and in eight days the patient died.

It was found, on dissection, that a large thick cyst occupied the right iliac and lumbar regions, and extended into the pelvis: it also surrounded the cæcum, in which there was an ulcerated opening, capable of admitting a finger.

“Women, in the puerperal state, are

liable to the formation of abscesses immediately above the groin. These, when slow in their progress, and confined to the cellular texture of the iliac fossa, are difficult to be discovered; but, when they rise above Poupart's ligament, and separate the peritoneum from its connexion with the parietes of the abdomen, they are more easily recognized. We also meet with abscesses in the same situation from inflammation and suppuration of the ovarium.

Dupuytren recommends that all these deep-seated abscesses should be left to nature, and allowed to burst, as they generally do, into the bowels, vagina, or bladder. I think, however, that as soon as the symptoms are well-marked, much mischief may be prevented by puncturing them, and evacuating the matter,—a practice which I have frequently had recourse to with decided advantage.”

We perfectly agree with Dr. Macfarlane in the last piece of advice. A moderately early opening of these serious chronic abscesses is generally advisable.

CASE 4.—Organized Sarcomatous Tumor between the Layers of the Abdominal Muscles.—Extirpation.—Cure.

W. T., æt. twenty-two, 25th September, 1831. There was situated in the right iliac region, nearer to the spinal column than the umbilicus, a smooth ovoid tumor, about the size of the fist, which had a hard cartilaginous feel, admitted of hardly any motion, and was apparently attached to the floating end of the twelfth rib. It projected nearly an inch beyond the level of the abdominal integuments, and was distant six-and-a-half inches from the umbilicus, four inches from the spinous processes of the vertebræ, and four from the anterior superior spinous process of the ilium. The fingers could be partially insinuated under its anterior margin, which was slightly irregular, and from which firm bands were felt passing in various directions.

When the tumor was first observed, two years ago, its origin being attributed to severe exertion, it was about the size of a field bean. It gradually increased,

and became so painful as often to prevent sleep,—the pain being not only situated in the tumor, but also extending across the abdomen, and along the right thigh.

The majority of Dr. Macfarlane's colleagues thought in consultation that the tumor was too deeply attached to admit of a safe and successful operation. Mercurial inunction, &c. were employed without avail, and at a second consultation, the removal of the tumor by the knife was agreed to.

The tumor was extirpated with great ease. On making an elliptical incision, eight inches in length, and dissecting off the investing integuments, the tumor was still covered by a layer of muscular substance, which was found to be the external oblique. When this was divided, the tumor came into view, and was found resting on, but not attached to, the ribs. It was easily separated from its posterior attachments by the finger, and made to start from its deep position by pressure. It was about the size of a lemon; had a greyish colour, not unlike half-bleached wax; was in some parts semi-transparent, and exhibited a smooth, compact texture,—its centre being fibrous. It was covered by a firm membrane; and was found, when analyzed, to be chiefly composed of albumen.

The wound healed well, and the patient was dismissed cured on the 15th of November. Dr. Macfarlane appends some judicious observations on the diagnostic marks of the tumor, or rather of its seat and its attachments. But these may be omitted.

CASE 5.—Fibro-cartilaginous Tumor between the Layers of the Abdominal Muscles—extirpated with part of the two Inferior Ribs—Death.

Mrs. R., æt. twenty-six, admitted on the 18th January, 1832. In the right iliac region of the abdomen there was situated a tumor about the size of the fist. Its posterior margin was distant from the spinous processes of the vertebræ two inches, and it passed obliquely downwards and forwards to near the anterior superior spine of the ilium. It appeared to be attached to the two in-

ferior ribs, and for the space of two inches to the crest of the ilium. It had a hard cartilaginous feel, was of an oblong shape, and measured six inches in the greater and five in the lesser diameter. It projected from the side of the abdomen somewhat prominently, was covered by healthy integuments, admitted of limited motion, and at the lower edge the fingers could be passed under it. It occasioned severe pain, especially during the night, which extended to the thigh and prevented sleep. Its origin was attributed to a fall against the edge of a table three years ago. When first observed, it was as large as a pigeon's egg, and was situated over and apparently fixed to the ribs. Her health had varied considerably, and she had employed a variety of local and constitutional remedies without the slightest benefit.

The patient had been in the hospital a year previously, when the tumor was smaller, more moveable, and less painful. Subsequently it became more fixed. The patient was anxious for its removal, and Dr. Macfarlane was convinced that it was placed between the layers of the abdominal muscles, and that it might be removed without laying open the cavity of the abdomen, or wounding the peritoneum. At the same time he was aware of and pointed out to the patient the risk of peritoneal inflammation. She consulted many gentlemen, obtained, as usual, various opinions, and it was not until the 19th January, 1835, and when the tumor had acquired the characters already fully mentioned, that she made up her mind to submit to the operation.

"She was laid on her left side, under which a folded pillow was placed. An incision was made over the centre of the tumour, commencing an inch from the spinal column, and extending obliquely downwards and forwards for about two inches beyond the anterior superior spine of the ilium. The integuments were dissected back, and the external oblique muscle exposed. In order to ascertain how many muscles covered the tumour, I cut freely down over its lower margin, and found it to be situated betwixt the internal oblique

and transversalis. It adhered so intimately to both these muscles, that its separation from them was impracticable. I therefore divided the transversalis, with great caution, at the lower part of the wound. The finger was then passed between it and the peritoneum, and the internal oblique and transversalis divided close to the lower and outer edge of the tumour, which had to be separated also from the iliacus internus, and from the psoas muscle, under the edge of which it dipt. Its attachment to the floating ends of the two inferior ribs was so intimate as to render necessary the removal of these parts along with the tumour. The finger was passed under the ribs to separate the subjacent soft parts from them, which was done with ease: they were then divided close to the tumour with Liston's bone forceps. The operation was finished by detaching the anterior part of the tumour, and separating the peritoneum from its base. Three arteries were tied; the largest of which was the epigastric. Not more than six ounces of blood were lost. The cavity that remained could contain the fist. Its boundaries were distinctly seen, and the peritoneum found to be uninjured. Four sutures were introduced, and the wound dressed with straps and compress, over which a broad bandage was applied."

On examination, the tumor, which was of an oval shape, and somewhat flattened, had a smooth surface, but felt exceedingly hard. It was of a fibro-cartilaginous structure, and was with difficulty divided with a scalpel. The extremities of the two ribs had penetrated fully an inch into its substance, and were firmly attached to it. It was evident that the tumor had not originated from the ribs, but had only become attached to them during its growth.

The succeeding diurnal reports we need not dwell on, our object being rather to point out the characters and symptoms of abdominal tumours than to notice the common sequelæ of operations. The patient became affected with the usual symptoms of peritonitis, and died in the night of the 22d, eighty-one hours after the removal of the tumor.

On inspection, the common marks of peritonitis were discovered, the peritoneum, however, having been uninjured in the operation. A small quantity of blood was extravasated into the cellular tissue between the peritoneum and the iliac muscles.

The two preceding cases are both interesting. They shew the occasional occurrence of a morbid growth, of a fibro-cartilaginous character, between the layers of the abdominal muscles, and they shew too the necessity of forming a correct diagnosis early, in order that an operation may be practised before the tumor has acquired attachments that render its removal difficult and dangerous.

II. TUMORS OF THE PERITONEUM, OMENTUM, AND MESENTERY.

Tumors, Dr. Macfarlane observes, are not unfrequently developed in the peritoneum, grow to an immense size, and produce urgent symptoms; yet the most accurate examination will seldom enable us to ascertain their seat or attachments. Sometimes these are confined to a small portion of the peritoneum, covering the abdominal muscles; they are, however, oftener found in connexion with extensive disease of the omentum.

CASE 5. *Disease of the Omentum simulating Enlargement of the Ovarium.*

Dr. Macfarlane was requested to visit Mrs. O., æt. 49, on account of ascites, complicated with a tumour in the abdomen. It had commenced four years previously as a small moveable tumor in the right side of the belly, below the umbilicus, which did not give her pain nor increase in size for three years. She had then an attack of peritonitis, from which she recovered with difficulty, and was afterwards subject to acute pains in the abdomen,—nausea, vomiting and constipation. The tumor now increased rapidly; fluctuation was distinctly perceptible; she became emaciated; the pulse quick and feeble; the tongue red and parched; the urine scanty; and she had a cough and dyspnœa.

Dr. Macfarlane drew off the water in the abdomen, and was then enabled to

institute a more precise examination of the tumor. It was about the size of a child's head, and placed in the anterior and inferior part of the abdomen. It had a nodulated feel; could be moved from side to side; and did not appear to be attached to any of the subjacent viscera. The fingers could be pushed under it; and when it was raised up as far as the relaxed state of the abdominal integuments would permit, it was found fixed to the pelvis, by a pedicle about the thickness of the wrist. From its upper edge to about the arch of the colon, several other tumors of different sizes were felt; and, in connexion with these, there was a hard ridge, about the thickness of the finger, passing obliquely across the abdomen.

"At first, I was inclined to believe that the right ovary was the seat of the disease, and that the fluid had accumulated, not in the cavity of the peritoneum, but in an ovarian cyst, of which the nodulated tumors formed a part. On examining more minutely, however, I ascertained that some of the small tumors were attached to the parietes of the abdomen. The integuments were so relaxed and attenuated by long-continued distention, that I was able to pull them out to a considerable distance from the subjacent viscera; and, by grasping them between the extended hands, and rubbing the one against the other, the irregularities alluded to were distinctly recognized. I was now satisfied that the peritoneum lining the abdominal muscles was affected, and that its surface was covered with tubercles, forming the disease so well described by Dr. Barron;* but I still considered the large tumour connected with the pelvis to be an enlarged ovary."

The water re-accumulated in the abdomen, and in about two months the patient died.

Dissection.—In the cavity of the abdomen there was about ten pints of a dark-coloured viscid fluid. The peri-

* "See Enquiry, illustrating the nature of Tuberculated Accretions of Serous Membranes, &c.—London, 1819."

toneum covering the abdominal muscles was much thickened, of a dirty yellow colour, and studded over with tubercles of different sizes. The intestines were hid by a large mass of tumors, extending from the epigastrium to the pelvis, arising, not from the ovaria, which were healthy, but from a diseased state of the omentum. At the upper part, the mass retained the natural attachments of the omentum to the stomach and colon; but inferiorly, it was fixed deep in the pelvis by preternatural adhesions, forming the thick stalk which was mistaken, during life, for an ovarian pedicle. The omentum was hard, and, in some places nearly cartilaginous; and the whole mass weighed nine pounds.

Dr. Macfarlane points out the liability of such a morbid growth to be mistaken for ovarian tumor, and the serious consequences that would follow from gastrotomy performed for that disease. The taste for gastrotomy is now gone by, and little need be said upon that head. Dr. Macfarlane quotes from Andral a case somewhat similar to the preceding. In that, after the existence of obscure symptoms of abdominal and uterine irritation for several months, a round tumor was discovered, rising from under the pubes and reaching to the umbilicus, which was supposed to be the uterus. It gradually enlarged, latterly, so as to occupy both iliac regions,—became irregular on the surface, and acutely painful on pressure. On dissection, the tumor was found attached above to the stomach and colon, below to the uterus and its broad ligaments. It consisted of a scirrhotic cartilaginous enlargement of the omentum.

"This disease of the omentum, when not accompanied by ascites, has also been mistaken for extra-uterine pregnancy. I have met with two cases of this kind,—one of which I shall detail very shortly; the other I had only an opportunity of examining once. This patient was seen by an immense number of medical men; and, when in Edinburgh, she was requested to submit to an operation, which she declined. I learned afterwards that the nature of

the disease was correctly ascertained by dissection."

CASE 7.—*Disease of the Omentum mistaken for Extra-uterine Pregnancy.*

A woman, æt. 41, had menstruated twice after weaning her fourth child,—when this secretion ceased, and did not again return. She then began to complain of dull pains, with a feeling of weight in the belly,—of nausea, occasional vomiting, flatulence, and constipation. The abdomen became gradually more and more prominent, the mammae enlarged, and she felt confident that she was pregnant. At the end of the sixth month from the commencement of these symptoms, the swelling became stationary; and in three weeks it had declined considerably. She had now frequent and severe attacks of pain in the abdomen, with increased disturbance of the bowels. Emaciation took place rapidly; the countenance became sharp and anxious; the pulse quick and feeble; the tongue dry and florid; and the abdomen was still more prominent than natural, particularly in the hypogastric, umbilical, and left hypocondriac regions.

On examination, an ill-defined tumor, of a globular form, and about the size of an orange, was discovered, a little above and to the left of the umbilicus; whilst immediately under, and apparently in connexion with this, three or four ridges, separated from each other about a quarter-of-an-inch, were felt and could be traced obliquely across the abdomen for nearly three inches. These appearances, when viewed in connexion with the history of the case, led to the belief that extra-uterine pregnancy existed. An operation was proposed and even agreed to, but Dr. Macfarlane having seen the same appearances in a case of diseased omentum, dissuaded the patient from submitting to the knife.

In about three weeks she died. On dissection, the omentum was found so diseased as not to retain the slightest vestige of its original structure. It consisted of globular tumors of various sizes,—the largest of which was situated in the left hypochondrium, and

had been mistaken, during life, for the head of a child. Their texture was fibro-cartilaginous, as were also the ridges, which extended along the whole breadth of the diseased mass, and which resembled the ribs of a child when examined through the parietes of the abdomen. The omentum was also attached to the intestines by old adhesions.

"Gastrotomy may be performed with success when the fœtus has passed through a rupture of the uterus into the cavity of the abdomen. When this takes place, the symptoms which it excites are seldom very equivocal. It appears during labour, and is generally preceded by violent uterine action,—which is immediately followed by a complete cessation of the parturient efforts, and alarming collapse. The absence of the presenting part of the child, on examining per vaginam, and the irregular flattened feel of the abdomen, in which the outline of the fœtus can be traced, will also materially guide the diagnosis. When the hand can be introduced, however, through the lacerated opening into the abdomen, and the child extracted by the vagina, no surgeon would think of having recourse to gastrotomy.

This operation, although strongly recommended, is, I think, of more questionable utility when the fœtus has been extra-uterine from its commencement, and has grown either in the fallopian tubes, in the ovaries, or in the cavity of the abdomen. We can rarely obtain symptoms sufficiently characteristic of this form of extra-uterine fœtation: but, although an operation were performed, and our opinions found correct, we have difficulties still to encounter in opening the pouch, extracting the child and placenta, and arresting the hemorrhage, which will be more apt to lead to a fatal result, than were the case left to nature. The fœtus may remain for a great length of time in the abdomen without exciting very urgent symptoms; or it may contract adhesions to the walls of the abdomen, to the bowels or bladder, and be discharged by ulceration."

III. TUMORS FROM ALVINE CONCRETIONS.

Alvine concretions occasionally give rise to tumors, which present the characters and occasion the effects common to many or almost all abdominal growths. Their diagnosis is frequently obscure. The following are curious instances of the facility with which errors may be committed.

"I recollect having had under my care, when a student of medicine, one of the city paupers, who had a tumour in the right side of the abdomen, about the size of a fist. From the account she gave of it, its apparent connexions, and the accompanying symptoms, it was supposed to be a concretion in the colon. She stated that, when it was first discovered above the right ilium, she could move it upwards and forwards, in the direction of the colon, to about the middle of its arch, but, as it increased in size, it became fixed between the crest of the ilium and the false ribs. She had severe pain and troublesome constipation, followed by repeated attacks of peritonitis.

After several consultations, it was agreed to lay open the abdomen and colon, and remove the concretion. I was present at the operation, which was performed by a respectable surgeon, with the concurrence of the first medical authorities of the place. When the abdominal integuments were divided, a large cyst came into view, which was opened, and found to contain hydatids. It was extensively attached to the concave surface of the liver, and, of course, could not be extirpated. It had so pressed on the ascending colon as to produce an impediment to the passage of the feces, and attacks of peritonitis, in every respect as well marked as if the tumour had existed within the cavity of the bowel.

Tumours of various and dissimilar kinds have been mistaken for alvine concretions. In one case detailed in the *Edinburgh Medical and Surgical Journal*, (No. 33, p. 112,) an operation was strongly advised, but fortunately not performed, as the disease turned out to be scirrhus of the pylorus."

A biliary calculus, lodging in the bowels, may become the nucleus of a concretion.

CASE 8.—Alvine concretion in the Ileum—Peritonitis—death.

A ploughman, æt. 38, had an attack of jaundice, with acute pain in the epigastric and right hypochondriac regions, which was removed by emetics, purgatives, and venesection. He continued in good health for three years, when he had occasional colic pains and constipation, for which purgatives and enemata were employed with advantage. These symptoms increased, and gastroenteric fever supervened. Immediately under the umbilicus, where he had a constant feeling of weight and distension, a solid but ill-defined tumor was discovered, which was slightly moveable from side to side. He had a violent attack of peritonitis, the flatulent swelling increased so as to conceal the tumor, and the patient shortly died exhausted.

On inspection there was found the marks of peritonitis. The small intestines increased gradually in size and thickness from the stomach downwards. The ileon was excessively extended, and contained, near its termination, a globular tumor, as large as an orange. This was found, on splitting up the bowel, to be an alvine concretion, of a dark brown colour, rather rough, and porous externally, but, internally, of a more dense and compact texture,—the nucleus, consisting of a yellow-coloured biliary calculus, about the size of a kidney bean. The mucous tissue of the ileon was extensively ulcerated, and the calibre of the gut contracted immediately under the site of the tumor.

In this case the symptoms were tolerably well marked, yet no satisfactory diagnosis could be formed. Of the advice to cut down upon the colon when alvine concretions are suspected we need say nothing. The taste for vivisections has declined within this year or two.

IV. OVARIAN TUMORS.

As Dr. Macfarlane properly remarks, the disease of the ovaria in early life,

is usually the formation of cysts; because at that period the organ contains a number of vesicles. In later ages the ovary shrivels, and then more solid enlargements prevail. Sometimes, he continues, the first appearance of disease in the ovary consists in the formation of a cyst, which gradually enlarges, so as nearly to fill the abdomen; but more frequently, sarcomatous enlargement takes place to some extent before any serous or gelatinous fluid is secreted. When this occurs, the tumor, at an early period is smooth, compact, and globular: but, as it enlarges, it becomes tuberoso, from the effusion of fluid, and the consequent developement of cysts within the ovarian substance.

In the first case related by our author the left ovarium was occupied throughout by a solid enlargement. We see nothing in it worth recording.

The second case is more interesting, being a specimen of malignant alteration of both ovaries.

CASE 9.—Malignant Enlargement of both Ovaria.

A. M. æt. forty-three. The abdomen, which was as large as is usually observed in the ninth month of uterogestation, was completely filled with a smooth and apparently solid tumor. By relaxing the abdominal muscles, which were unusually thin, and by placing the patient in a favourable position, Dr. M. was able to push his hands under the tumor, raise it slightly from the subjacent viscera, move it a little from side to side, and make the abdominal parietes glide over it. This appeared to show that no adhesions existed between it and the viscera or parietes of the abdomen; but it was impossible to ascertain the nature or extent of its attachment to the pelvis. It filled this cavity, and of course admitted of very little motion. The disease had commenced nine years previously as a small moveable tumor above the right groin. Two months previously the disease had become much aggravated in consequence of her receiving a blow upon the part. In a month after the date of the report she died.

Dissection. The tumor was slightly

attached to the parietes of the abdomen and to the omentum; but it adhered very intimately to, and was with difficulty separated from, both sides of the pelvis, the fundus of the bladder and uterus, and the upper part of the sacrum. It was found to rise from the right ovary, and had for its pedicle the broad ligament and fallopian tube, which were greatly enlarged, hard and tuberculated. The fundus uteri was also irregularly enlarged and possessed the stony hardness and fibrous appearance of carcinoma. The tumor was of a solid texture, except towards its posterior and inferior part, where it contained several cysts, filled with a dark-brown fetid fluid, in which were small coagula of blood. The lining membrane of these cysts, which were of different sizes, was covered with soft, purple-coloured, spongy excrescences; and the solid portions of the tumor surrounding them were softened and mixed with fetid matter. The left ovary was likewise enlarged, and adhered to the corresponding side of the pelvis and to the large tumour.

In this case, the ovaria, right fallopian tube, and fundus uteri, were involved in the same disease, which was probably malignant.

As Dr. Macfarlane correctly observes, the presence or absence of burning pain is no criterion of the simple or malignant nature of the tumor, the pain being dependent on the existence of slight peritoneal inflammation.

Dr. Macfarlane has witnessed during the last fifteen years above forty cases of ovarian tumors, and he possesses the notes of fourteen dissections performed by himself. The following particulars are interesting in connexion with the question of extirpation.

"When the disease was first noticed, two of the fourteen patients were under thirty years of age; four were from thirty to forty; five from forty to fifty; and three above fifty. Before the disease proved fatal, it existed in two cases four years; in three, eight years; in one, nine; in four, eleven; and in other four, from thirteen to eighteen years. In four cases, the tumour was confined to the right ovary; in seven, to the left;

and in three both were implicated. In one, the ovary was distended into a large cyst, without any appearance of solid growth, and was, of course, mistaken during life for ascites; in nine, chronic enlargement existed, in combination with one or more cysts containing fluid, (six of these were tuberoses, and three smooth on the surface); and the remaining four were solid throughout. In twelve of these cases, adhesions, more or less intimate and extensive, existed between the tumours and the parietes and viscera of the pelvis; three of which had likewise become adherent to the abdominal parietes, omentum and intestines. Only two were free from preternatural adhesions; and in these the tumours were attached to the broad ligament by a slender pedicle. In three of the twelve cases, it appeared that the adhesions might have been divided without much risk or difficulty; but in the remaining nine, this procedure was altogether impracticable, and could not have been accomplished without imminent danger to all, and certain death to some. In eight of the adherent cases, the basis of the tumour was thick and broad,—the size of this part appearing to depend more frequently on the extent and intimacy of the secondary attachments to the pelvis, than on the magnitude of the tumours.

Before stating the objections which, from these and other considerations, I have been led to form against the operation of gastrotomy for the removal of ovarian tumours, I shall allude very briefly to the results of some of the published cases in which this treatment was employed. These remarks shall be confined to twelve cases, three of which occurred to Dr. M'Dowal, of Kentucky, in America; four to Mr. Lizars, of Edinburgh; and five in Germany, to Deffenbach, of Berlin, Hopper, Chrysmar, and Martini. Of these, four died and eight recovered. In nine, the tumours adhered, more or less extensively, to the contiguous parts; in four of these, the adhesions were divided, and the tumours wholly removed; in one only a part of the disease was extirpated; and in the remaining four,

the extent and intimacy of the existing adhesions prevented the operations from being completed. In one of the cases, the abdomen was opened, and no tumour found: this patient fortunately recovered. Besides the extent of the adhesions, the operator was deterred from removing the tumour in another case, by the number and size of the arteries, which were seen to pulsate violently in the pedicle."

Gastrotomy is now so little likely to be hastily performed that we need not add the doctor's arguments against it. We beg the attention of our readers to the preceding cases, containing as they do much valuable practical information.

FRENCH OPINIONS UPON ENGLISH HOSPITAL SURGEONS AND SURGERY.

The constitutional vanity of a Frenchman has long been a matter of admiration and amusement to surrounding nations. There is no country like La belle France—no people like the brave Français—and every thing he sees or hears, or reads of, satisfies the Frenchman more and more of his incomparable superiority over the remainder of mankind. Madame de Staël hit off the character of the Gallic traveller to the life. Her Comte d'Erfeuil is a perfect representative of the genus.

"Il parcouroit chaque ville, le guide des voyageurs à la main; il avoit à la fois le double plaisir de perdre son temps à tout voir, et d'assurer qu'il n'avoit rien vu qui pût être admiré, quand on connoissoit la France."

Some one, we forget who it was, remarked that the French are a very ignorant people, for they know scarcely any thing of what other nations do. The observation is a very just one: for, although some brilliant exceptions may be found, the savans of France are so perfectly contented with their monopoly of all knowledge, that they look with sovereign contempt at the tiny folks, who, in England, and Germany, and Italy, are so credulous as to imagine that they are not entirely destitute

of some small portion of learning and science.

A. M. Baumés, a Comte d'Erfeuil in his own small way, has lately, it would seem, paid a visit to the English hospitals. On his return to France, he could do nothing less than expose the utter darkness of the English surgeons, and the raw, uncivilized state of English surgery. Accordingly, he wrote a series of letters in the *Gazette Médicale*, exposing, in a candid and an able manner, the imbecility of M. Jean Bull.

These letters have been noticed in two of our contemporaries—the *Medical Gazette*, and Dr. Ryan's *Medical and Surgical Journal*. The former is inclined to be merry with M. Baumés; but the writer in the latter is delighted at the exposé of his countrymen.

M. Baumés, it seems, is a citizen of Lyons, where he is *chirurgien-en-chef* of an hospital. Now think of a *chirurgien-en-chef* of Lyons, condescending to visit so inconsiderable a town as London. Dr. Ryan's journalist very properly dwells upon the gratifying circumstance, and ingeniously remarks, that a man of such importance is not likely "to cast any sheep's eyes" at the hospitals of our city. This reasonable supposition has probably been fulfilled, as we have not yet heard of any such eyes having been discharged at Mr. Lawrence or Sir Benjamin Brodie, while peripateticising in St. George's or Bartholomew's. But, though M. Baumés has thrown no sheep's eyes, he has flung much dirt, and our contemporary, like those industrious little boys that the curious traveller may see at horses' tails, trailing a small barrow, and carefully collecting their valuable dung—our contemporary, we say, has put in his small barrow M. Baumés' mud, and strange-looking mud it is.

In the first place, M. Baumés is shocked to observe that, since the visit of M. Roux—a fifth part of a century, the art of surgery has undergone scarcely any change in England. What an excellent thing is a microscopic eye. We, in our simplicity, thought we had observed some important changes, even

within these last ten years—we thought that a great deal had been done to increase our knowledge of the different varieties of tumors—to correct our notions and regulate our practice with respect to hernia—to distinguish the diseases of the breast and testicle—to define our acquaintance with the different fractures and dislocations—and we dreamed that much, very much, had been done, in the advancement of our acquaintance with the diseases of the urinary organs and the joints. In all these departments of surgical science, we were actually so very ignorant and weak, that we imagined our brothers of France were behind us. *Point du tout*. They are in the van—they are out of sight, so far out of sight, that we cannot even see the dust that their march raises. M. Baumés is *émervillé* at our halt—he is “struck all of a heap” at the sorry figure cut by our miserable hospital surgeons. The diseases of the joints are not at all understood by Sir Benjamin Brodie—his pathological investigations are mere moonshine—and the only real acquaintance with these maladies is to be found in France. Hear M. Baumés:

“He has seen different kinds of articular tumors, white swelling, for instance, increase and aggravated with rapidity, ultimately rendering an operation necessary, when a rational treatment might have superseded it;” and “any one who observed their (the English hospital surgeons’) practice for a given time may readily remark, that amputation is frequently had recourse to in cases that, in France and other countries, would assuredly be cured by following the more rational means of pathological physiology.”

How delightful it is to see a new light poured in upon a subject—to observe how it dispels old and prevalent errors, as a candle routs a host of bugs. It was generally believed, until M. Baumés asserted the contrary, that the French were the people for unnecessary operations—the French hospitals the spots where limbs were sacrificed, that in this country are saved. Such was the remark of every English surgeon and physician, nay, of every English

student of medicine, who witnessed the practice of the Continental hospitals. But this was all a pure mistake—our students and our surgeons were blind or jealous—they were thinking of what they had seen in England—not of what they then witnessed abroad. Oh yes! it was reserved for M. Baumés, and the writer in Dr. Ryan’s *Journal*, to discover the delusion; and they have discovered it. *Par nobile fratrum!*

“Again,” says the English echo of the Gallic cock, “to shew how ‘the operation’ is always uppermost in the mind of your conceited hospital surgeon, how much rather he makes a case an opportunity for the display of his operative powers, than of his conservative capabilities, it is only necessary to say that when M. Baumés observed the ill-placed treatments of these articular inflammations to several of those who treated them, the answer he got was, that ‘if they put off the operation too long a time, that is, if strong febrile symptoms supervened, the operation did not succeed;’ whereas the very fever they feared themselves, originated with their calomel, their iron, antimony, and similar irritants ordered at a risk during one of their flying visits. ‘I have seen (says the writer in another place), in several hospitals, patients affected with articular tumors, with caries of the bone, fistula, abscess, &c. to whom amputation was proposed; and in the meantime, under pretext that a great degree of debility existed, wine, tonics, and various cordials were freely administered, although it was at the same time evident that there was extreme irritation of the gastric organs, in great part consequent on the evacuant, aperient, mercurial and other treatment that had been employed for the purpose of getting rid of a complaint which they had thereby increased.’”

So those ignorant fellows, our hospital surgeons, first of all treat an articular inflammation by calomel, iron, antimony, and *similar* irritants. Really we can see little likeness in the operations of iron and of antimony; and we do not think the latter, at all events, very likely to produce a fever. But pardon, M. Baumés, antimony will

produce a fever—a real fever—a gastro-enterite. Aye, there's the rub. Our Brodies and Coopers are not of the new light—they are not of the élite of the école physiologique—they are not Broussaisans—they don't order leeches to the epigastrium, for scrofulous diseases of the bones of the knee. Stupid and wicked folly! Well may the writer in Dr. Ryan's journal elegantly observe:—

“Here there are some nuts for our pure surgeons to crack: the writer does not get his information second-hand: what he relates he has witnessed ‘in the practice of the first surgeons in London’—*first surgeons!!*”

First surgeons indeed—no, this well-informed reviewer and M. Baumés are the real chirurgiens-en-chef. See how they would manage a white-swelling—see how they would apply the great physiological theory. Unfortunate patients, to be deprived of such talents, of such services as their's!

But this is nothing to that which comes after. We all know the singular notion that has existed with reference to the inertness of French therapeutics—we all know how we hugged ourselves on being, at least, more active practitioners than our lively neighbours. This is another point on which we are corrected—this is another mental cataract that M. Baumés couches. The fact is, that the French have all along been the folks for active measures, and we have been the patrons of lavements, and ptisans, and eau sucrée, and thin potages.

“Mr. Lawrence he mentions as an honourable exception to the general rule of ignorance and darkness in the progress of surgical science. ‘I can affirm (he says), that I have seen him arrest a violent peritonitis, consequent on the operation for strangulated hernia, in as short a time as any French surgeon that has been accustomed to the rational therapeutical treatment of such affections, and this by his vigorous antiphlogistic remedies. *Had the patient been in any other hospital, I do not think he would have escaped death.*’”

The Italics are all our contempo-

rary's own. He really believes this impudent Gascon—he seriously endeavours to persuade his readers that this nasty compound of unblushing ignorance, and equally unblushing lies, is a true picture of English hospital surgery. We have really no patience with the dolt that can retail such abominable trash. We would recommend the Editor to give his reviewer what, at Eton and at Westminster is technically known under the name of a *bummer*. It is the only way to teach him common decency and common sense.

AN ESSAY ON CLINICAL INSTRUCTION.

By E. LOUIS, M.D. Physician to the Hôpital de la Pitié.

M. Louis divides the objects of clinical instruction and clinical study into two: first, into the study of particular facts, or of diseases considered in an isolated manner; secondly, into an inquiry into general facts. The lecture before us is much too long, and rather too abstruse, to enable us to go deeply into it at present, and we content ourselves with noticing merely that portion which relates to the real value of pathological anatomy.

“Another method of exploration,” says M. Louis, “not less general, is Pathological Anatomy, which fixes the value of the others, and presupposes long habit and perseverance, in order to be a useful instrument in the hands of the practitioner. Pathological Anatomy declares the value of the other methods of exploration which it interprets. Without it, for instance, how should we know that crepitous *râle* indicates the first degree of pneumonia; that *gargouillement* and pectoriloquy demonstrate the existence of tuberculous cavities? that *ægophony* corresponds to an effusion of fluid into the cavity of the pleura? the symptoms of softening of the brain to that affection? those of adynamic fevers to a profound alteration of Peyer's glands? Evidently these facts would be unknown to us.

We might certainly, without the assistance of this science, and by the aid

of the symptoms alone, determine the seat of a great number of maladies, but of their nature we should remain ignorant. The symptoms of apoplexy indicate sufficiently that the brain is the seat of this affection, it is the same with the symptoms of softening of this organ; but how, without the aid of pathological anatomy, could we know that the former are caused by a hæmorrhage, the latter by a softening or inflammation of the brain. But as the history of symptoms becomes valueless, unless they have been noted with great care, from their commencement to their termination; unless all the functions have been interrogated in the same manner: so pathological anatomy can only render to science all the service which might be expected from it, when we proceed with extreme care to an examination of all the organs, in those cases which proved fatal.

The object of pathological anatomy, in fact, is not merely to point out the seat of diseases, to show their nature, to verify or unravel their complications; it is the only means of arriving at the knowledge of a great number of the laws of the economy of disease which are the most important: and this knowledge can only be the result of an equally attentive examination of *all* the organs, in those cases where the patient has sunk under his disease, whatever it may have been.

If, for example, we know at this day that after the age of fifteen years, whenever we find tubercles or grey semi-transparent granulations in any organ, they co-exist at the same time, and in a still more advanced stage, in the lungs, it is to pathological anatomy, cultivated as I have just said, that we owe this fact. For if we had contented ourselves with examining in most cases the organs primitively and principally affected, evidently we could not have arrived at the knowledge of the law just mentioned, the importance of which cannot be doubted.

It is in the same manner, and by the same researches, that we have learnt that ulcerations of the pharynx, the œsophagus and the small intestines are peculiar to two affections (I except

syphilis) the one, acute, typhoid fever, the other chronic, phthisis, that ulcerations of the epiglottis, larynx and trachea are, with the exception already mentioned, peculiar to phthisical cases; that it is almost the same with fatty liver. And the importance of the laws announced by pathological anatomy, is still greater than at the first glance we might suppose; for these laws may in some instances, independently of the symptoms, in their absence, and even in opposition to their evidence, lead us to a rigorous diagnosis; thus chronic peritonitis, I mean that which is chronic at the commencement, is, in the adult, or rather at the age of fifteen years, according to all the facts which I have hitherto collected, constantly tubercular, or connected with the existence of grey semi-transparent granulations developed upon the peritoneum.

But, as I have previously mentioned, neither of these lesions exists in any organ, without appearing simultaneously in the lungs; so that if we have good evidence that chronic peritonitis exists, we may, independently of the symptoms derived from the respiratory organs, and even in their absence, announce the existence of a greater or less number of tubercles, or of grey, semi-transparent granulations, developed in the lungs. We may safely do so; for if observation should hereafter show any exception to this law, these exceptions will be rare, and will not affect the existence of the general law.

I have more than once recognized and announced the existence of phthisis in cases which exhibited all the symptoms of chronic peritonitis, but in which auscultation and percussion did not indicate any appreciable lesion of the parenchyma of the lungs; and even in individuals who did not cough:—a diagnosis which some persons will call presumptuous, which however was not so, and which I could not have failed to make without denying the laws of the economy of disease, the science itself in fact; for of what does the science consist but of these laws?"

None who practise the higher departments of our profession, none, in fact, who make it what it ought to be,

a science, can fail to perceive the paramount importance of such great generalizations as the preceding. Such generalizations spring from an exact study of individual cases, and individual cases are themselves explained by the application of those generalizations—an example of the true spirit and the natural effects of inductive reasoning.

M. Louis takes up an important question, one too which has given rise to much dispute, and to some error. There can be no doubt that patients sometimes die, when dissection discloses no physical alteration of any consequence in any organ. Here the party, for such a party covertly or openly exists, opposed to the cultivation of pathological anatomy, imagine that the case makes against the utility of pathological investigations. Death, they say, takes place here without any great alteration of organs, and consequently when such alterations occur, they are not so important as they seem. M. Louis takes up the subject in a much more philosophical manner.

“But with whatever care we examine the state of the viscera, cases occasionally occur, in which the inspection of the body does not evidence any lesion capable of explaining either the fatal termination, or the symptoms observed; and it is cases of this sort, on which no doubt can be cast, which have given rise to the idea, that pathological anatomy has not all the importance which we attribute to it. But these cases are precisely those which prove in the most evident manner the indispensable necessity of this branch of the science, since, if all the viscera had not been examined with scrupulous care, we could not have been certain that there was no serious lesion which would explain at once the symptoms, and the unfortunate termination of the case.

Whether then pathological anatomy shows, or does not show the reason of the phenomena observed during life, or the cause of the fatal termination of the malady, its utility is always the same; a contrary conclusion would in my opinion be opposed to evidence, and would declare that because some of the affections contained in our nosological chart

are sometimes latent, the study of symptoms is useless.

We say, without hesitation, that pathological anatomy has neither been too much extolled, as some think, nor too much depreciated, as is the opinion of others; but it has been often ill understood. It is a method of exploration which no other can replace; that is all which can be said of it, and assuredly it is much to say.”

This is indeed most true. Will the gentlemen who sneer at morbid anatomy find us any substitute for its exactness? Can they tell us how to read the language of symptoms? Will all the empiric observations of the Hippocratists, in every age, determine for us as much as of the nature, and the characters of disease, as the scalpel of the morbid anatomist has done? The answer to these interrogatories is obvious. Morbid anatomy is the only means of giving precision to diagnosis, an accurate direction to our treatment, because it is the only means of coupling symptoms with the states of the organs that occasion them.

The mode of connecting symptoms with lesions is thus dwelt upon by M. Louis.

“We must now ascertain the value of these symptoms, convert them into signs, as through them we are to arrive at a knowledge of the organ affected, or of the pathological state of the subject. For as I have previously mentioned at the commencement of this little work, there are cases in which the symptoms do not either at the commencement of the disease, or during an uncertain period of its progress, reveal any appreciable alteration of any organ whatever.

This second task, which constitutes in great part the art of diagnosis, offers no real difficulties in the majority of cases, at least to a man versed in the practical knowledge of disease; but in a considerable number of cases, these difficulties exist, and are not easily surmountable; and, in fact, are only to be overcome by considering the series and connexion of the symptoms; or by the assistance of the method of exclusion; that is to say, we arrive at the

knowledge of the organ affected, not so much from the serious disturbance of its peculiar functions, as because, whilst the other viscera give no sign of any appreciable lesion, that alone ought to be considered as diseased, whose functions are in any degree altered, even though these alterations are not very characteristic : or again, because observation has demonstrated, because it results from well proven laws, that a certain alteration, or a certain evident disease supposes the existence of another still latent. Thus, as I have said above, chronic peritonitis supposes at once tubercles in the peritoneum and in the lungs ; so that independently of the symptoms directly furnished by the respiratory organs, or in spite of the absence of such symptoms, we must conclude the existence of phthisis, from the single fact of the existence of peritonitis in a chronic form. If, in order to acquire an exact knowledge of any disease whatever, it is necessary to fix with precision the period of the appearance of the first symptoms, and to interrogate all the functions, this is especially indispensable in the cases of which we are now speaking ; and it is in these circumstances also that we ought to make use of all the methods of exploration, especially of auscultation and percussion, for how many similar difficulties have been removed by these two methods ! How many cases of pleurisy and pericarditis, for example, recognized by the employment of them, especially by percussion ! Let us add, that to prove the accuracy of our diagnosis, it does not suffice to shew, that the symptoms in the case under consideration, are those of this or that affection described by authors ; it is also necessary to shew that the symptoms observed agree with a certain disease, and with no other.

But, having discovered the organ affected, it is necessary also to determine the disease of which it is the seat : a new, and in the present state of the science, sometimes an insurmountable difficulty ; not so much from the divergence of the opinions of authors upon this point, as from the want of exact and numerous observation in a great

number of diseases, from which information might have been derived : especially from the want of anatomical inspections carefully conducted at different periods of the same disease.

For it is principally by pathological anatomy, that the comparison of symptoms with the lesions which correspond to them, that a question of this sort can be resolved. Thus, when we wish to fix the seat of any affection, or to indicate its nature, we may, in the present state of the science, meet with insurmountable difficulties at the sick bed, and even after death.

These cases ought neither to be dissembled, nor removed from the observation of those who seek true instruction ; for to dissemble the obscurities and difficulties of the science would be to deceive them. And besides, these cases are a valuable source of instruction, a means of strengthening the student in habits of observation, since we cannot decline to give a precise diagnosis in any case, until we have made use of all the means of investigation, compared with each other all the symptoms in their development and in their progress ; until, consequently, we have recalled a great number of general facts, all of which ought to be incontestable : for to discuss upon doubtful or contested facts, would be, as it were, to fall willingly into error. These cases, then, are of all those which present themselves, the most capable of forming the judgment of those who apply themselves to observation ; and of showing them, that the only way of making progress in the research of truth, is to admit as true, only that which is evident."

We now take our leave of this Essay on clinical instruction, which we recommend to every professor and to every student. It contains many sensible, though some perhaps are rather transcendental, remarks, on the best mode of studying and of pointing out the phenomena and laws of disease.

DR. CARBUTT'S REPORT ON DROPSY.*

Dr. Carbutt commences his report on this disease by remarks on the theory of absorption. He considers M. Magendie one of the most philosophical and accurate experimenters that ever lived. This eulogy is rather overstrained, at least we cannot consider M. Magendie as either very philosophical or very accurate; indeed the general opinion is opposed, and that very decidedly, to the accuracy of that gentleman. But let this pass.

Dr. Carbutt, from physiological considerations, concludes that in every instance of *passive* dropsy, the proximate cause is some impediment to the passage of blood along the veins, and consequently the non-absorption of the serous fluid. That obstruction, he observes, to the passage of blood along the veins is sufficient to produce dropsy, was shown by some experiments of Lower. He tied the vena cava inferior of a dog, which died in a few hours. Upon opening it, a collection of serum was found in its abdomen. The jugular veins were tied, when all the parts beyond them were found to be anasarca, and not filled with extravasated blood, as had been anticipated. The impediment to the passage of blood along the veins may be some disease of the heart, as ossification of its valves, contraction of the orifice of the right ventricle, hypertrophy of the right ventricle. Or the impediment may be some tumor lying upon and pressing a great venous trunk, as an enlargement of the liver, spleen, or pancreas, pressing upon the inferior vena cava,—aneurism of the aorta,—ascites pressing upon the inferior vena cava and the iliac veins, and causing anasarca of the lower extremities,—pregnancy causing the gravid uterus to press upon the iliac veins, and also upon the inferior vena cava. Or, the impediment may be a torpid an indurated, or a scirrhus state of the liver, or, in short, any state of the liver which prevents or retards the circula-

tion of blood through the vena portæ, which, as you well know, carries all the blood from the organs of digestion in tens of thousands of ramifications through the liver before that blood reaches the heart. Or the impediment may depend upon a plethoric state of the venous system, on account of the diminished secretion of urine, arising from some disease of the kidneys. Or, finally, the impediment may consist in the obliteration of one or more of the great venous trunks.

"When the impediment to venous absorption is some disease of the heart, as ossification of the vales, contraction of the orifice of the right ventricle, &c., our art is not able to do much. But, if the age and strength of the patient will permit, we may draw a little blood from the arm, thereby lessening the quantity which the heart will have to receive and transmit, and also encouraging absorption, which, as you have seen in M. Magendie's experiments, always takes place more rapidly when the quantity of blood in the circulating system is less. We may also administer digitalis partly to quiet the action of the heart, and partly to increase the flow of urine. We may administer mild purgatives, by way of carrying off a portion, at least, of the fluid which is continually entering, by the process of imbibition, into the intestines. We must also allow only mild and mucilaginous diet, in order partly to avoid exciting the heart, and partly to keep down plethora. Lastly, when the hydrothorax, the ascites, or the anasarca, has increased to a certain degree, so as to be nearly unbearable, we may perform the operation of *paracentesis thoracis* or *paracentesis abdominis*, in the first two cases, or we may scarify or puncture the limbs in the case of anasarca.

When the impediment consists in an enlargement of any of the abdominal viscera, which press upon one or more of the venous trunks in the abdomen, as in many of the species of physconia, we must endeavour to cure the enlarged viscous: for which purpose the various preparations of iodine offer us the fairest chance. In the mean time we must palliate the dropsical symptoms as we

* Clinical lectures in the Manchester Royal Infirmary. Octavo.

best can. In the case of an aneurism of the aorta, I am afraid little or nothing can be done. In the case of pregnancy, you must bandage up the lower extremities, keep the bowels open, and wait patiently for a happy delivery. In the case of an ascites, which produces anasarca by pressing upon, and impeding the circulation in, the vena portæ, the vena cava inferior, the external iliacs, all I can say is, that you must endeavour to cure both kinds of dropsy as rapidly as you can. If you cure the ascites the cure of the anasarca will usually follow."

Dr. Carbutt does not mention the powerful effects of elaterium, powerful, according as they are directed, to good or evil. He points out the advantages derivable from the exhibition of small doses of mercury in enlargements of the liver, and the frequency with which alterations or enlargements of this viscus coexists with abdominal effusion. But the Doctor also has a secret to communicate.

"But, suppose the patient has taken as much mercury as the system will well bear, suppose the mouth is sore, and the old decayed teeth are dropping out, and the liver is still not restored to its healthy action; well, then I have a secret to tell you, or rather I told it you whilst we were treating Margaret Kearney. A secret, I call it, although it is really no secret; for I have told it every where. A respectable medical man should, indeed, have no secrets,—because he who knows of a means of doing good to his fellow-creatures, and does not disclose it, can be nothing but a genuine object of contempt. The secret, however, as I call it, is this, that an aloetic pill taken in a small dose frequently repeated through the day, has in a period of time, longer or shorter as the case may prove, the same effect in restoring the liver to a healthy action as is produced by mercury. This fact depends upon the principle which I have already explained to you, that irritation at one extremity of a canal in the living body excites action at the other extremity."

We should be sorry to express a doubt, yet we do doubt, if the aloetic pill will

ultimately be found to have the same effect as mercury upon the liver. But we recommend our readers to put this to the test.

"As to obstruction of the passage of blood through the veins, arising from plethora,—that plethora depending on diminished secretion of urine,—I have to say that this generally depends upon disease of the kidneys; but if you expect that this disease of the kidneys will be infallibly pointed out by the albuminous state of the urine, you will be much disappointed. In this case you must, if the patient's strength will allow, apply cupping-glasses or leeches over the kidneys. You must administer diuretics, and if these fail, drastic purgatives, as elaterium, so that you may bring away the fluid by the intestines, and by any means lessen the excessive quantity of blood in the circulating system."

There is much truth in the observation that an albuminous condition of the urine is not an infallible evidence of disease of the kidneys. We have seen it on several occasions when dissection shewed the kidneys perfectly sound. At the same time the examination of the urine is desirable in all cases of dropsy, as indeed in a variety of other maladies. The following observations on obliteration of the venous trunks are not undeserving of attention.

"With regard to the obliteration of the venous trunks as a cause of *passive* dropsy, Dr. Bouillaud has, by numerous observations, fully proved its reality; and he has also showed that in a great number of cases, this obliteration was produced by sanguineous concretions or coagulable lymph effused in the body of the veins. He made these observations immediately after M. Magendie had published his new views of absorption.

Dr. Bouillaud reported three cases of dropsy of the lower extremities with obliteration of the principal veins of those members. He found also dropsy of the upper extremities when their principal veins were obliterated.

If the obliteration of the veins were confined to one member, then that member alone was affected with œdema; but

if the obliteration took place in the veins of two members, whether upper or lower, then both those members were affected. If the obliteration took place in the inferior vena cava, then the dropsy was confined to the parts from which the inferior vena cava receives its branches; and when the superior vena cava was obliterated, then the dropsy affected only those parts of which the venous system empties itself into the superior vena cava. So that it became impossible not to admit that dropsies were occasioned by an obstacle to venous circulation, and were not the result of debility*.

Dr. Bouillaud also reported three cases of *passive* dropsy of the belly,—ascites,—in which there existed an obliteration of the vena portæ, that is to say, of the venous passage which performs the same part in the absorption and carrying away of the abdominal serum, as is performed by the brachial and femoral veins, and their coexistent veins, in the absorption and carrying away of the serum of the cellular membrane of the limb.

Dr. Reynolds has published† several cases of obliteration of the iliac veins, and of the inferior vena cava, in which there was manifested a dropsy of the lower extremities. He has also published three cases of ascites arising from obliteration of the vena portæ.

Dr. Tonnellé has published‡ six cases of obliteration of the venous sinuses of the dura mater, with serous effusion in the cavity of the arachnoidea.

With regard to the cure of *passive* dropsy arising from obliteration of the veins, I believe I may say it is entirely hopeless, any further than as Nature may choose to take it upon herself; and she certainly sometimes does wonders in this way. In the case of a woman, whose left iliac vein was obliterated, a very large vein coming from the femoral veins of the same side traversed the

abdominal wall, making several turns, as high up as the umbilicus, it then bent itself in order to go down and enter the femoral vein of the other side. Single at its origin it divided itself into two or three branches, which soon reunited to form one trunk towards its termination. When the patient stood up, this vein was of an enormous volume, and equalled the size of the little finger. By the help of this anastomic circulation, the blood brought by the left femoral vein was carried almost entirely into the right femoral vein. At the same time as this anastomic venous circulation was established, a dropsy of the left inferior extremity became gradually dissipated. This is only a specimen of spontaneous cure; there are many other instances on record equally curious."

The second species of dropsy, or the *active* form, appears to have its seat in the arterial system, and to approach very nearly in its nature to inflammation of the part in which it is situated. Its character seems to lie about half way between the regular normal state of the secretions, and the secretion of inflammation. In the secretion of parts in their healthy state, no more is thrown out by the arterial branches than is taken up by the venous branches. In the secretion of inflammation there is thrown out a quantity of coagulable lymph, consisting, Dr. C. thinks, almost entirely of fibrine.

"The symptoms of *passive* dropsies are slowly developed. They are for the most part the result of the compression which the serous collection exerts as a foreign body upon the surrounding parts. The symptoms of *active* dropsies make on the contrary a very rapid advance, and, in this kind, besides the phenomena resulting from the pressure of the effused fluid, we observe a variety of symptoms which denote an increase of vital power and action.

With respect to the causes of *passive* dropsy, I have already said nearly enough; but I omitted to mention that one of the causes of obliteration or obstruction of the veins is *phlebitis*, or inflammation of the vein, and that it produces its effect by causing sanguineous

* J. Bouillaud. Art. Hydropisie.—Dict. de Med. Tome Xme.

† Journal Hebdomadaire de Médecine et de Chirurgie.

‡ Ibid. Tome v.

concretions or effusion of fibrine in the trunks of the veins. As to the causes of *active* dropsies, a sanguine or plethoric constitution, with the use of such articles of diet as are likely to produce the plethoric state, are to be reckoned among the predisposing causes. With regard to the occasional causes, the most frequent is the operation of cold and damp, especially when suddenly applied to a person in a state of perspiration, whether in consequence of violent exercise, or of the prolonged heat of the weather. Stout men, after forced marches, exposed to causes capable of abruptly suppressing perspiration, fall suddenly into the *active* kind of dropsy. Soldiers fording rivers, whilst in a state of perspiration, are particularly liable to it."

The following is the Doctor's treatment.

"In *active* dropsy, if the patient be young and plethoric, you must take blood from the arm. You must apply leeches locally. You must use the warm bath, blisters, diaphoretics, purgatives, and energetic diuretics. You must also employ mercurial preparations, as the action of mercury upon the system, has the same power in removing the hydro-phlegmasia, or *active* dropsy of serous or cellular membrane, as I have already intimated to you that it possesses in removing inflammation of those membranes. Above all things, the diet must be the lowest possible."

We do not observe much to detain us in Dr. Carbutt's remarks on anasarca. When general dropsy commences with anasarca of the lower limbs, this is, *cæteris paribus*, presumptive evidence of the cause of the dropsy residing in the heart. This is a general fact of some importance, on which Dr. Carbutt lays insufficient stress. *Active* anasarca frequently attacks individuals, who, when convalescent from eruptive fevers, expose themselves to a cold and damp atmosphere. As to the prognosis, says our author, of *active* anasarca, it is good; of *passive* anasarca without ascites, it is bad: of *passive* anasarca with ascites, and without any disease of the heart, it is not so bad.

"The mode of treating anasarca does not differ from that of treating dropsy in general; with this difference, however, that punctures and scarifications may be employed to give exit to the serum, and compressive bandages to support the tumid limb. We must recollect, however, that the incisions sometimes give rise to ulcers, which will not heal, to erysipelatous inflammations, and even to true gangrene. The making of punctures with sharp needles is the best way of avoiding these unpleasant consequences; but sometimes it is necessary to run all risks for the sake of immediate relief."

We extract the preceding passage, in order to point out, as forcibly as possible, the propriety of puncturing anasarcaous parts with a needle, in preference to a larger instrument. True it is, that even such punctures as these *sometimes* give rise to erysipelatous or diffuse inflammation. Yet this is usually not the case; and, at all events, it much less frequently occurs as a consequence of small needle punctures than of larger ones.

"In the *hydrothorax*, hydrops thoracis, or dropsy of the chest, the affection sometimes arises from hyper-secretion of the pleura, which constitutes *active* hydrothorax; and sometimes it arises from a diminution of venous absorption, which constitutes *passive* hydrothorax.

Active hydrothorax is not easily distinguishable from a slight acute pleurisy; and frequently a chronic pleurisy leaves behind it a serous effusion, which differs in no respect from hydrothorax not preceded by inflammation.

Hydrothorax ordinarily occupies only one side of the chest. The quantity of the effused fluid is very variable; it has reached twelve pounds. The lung corresponding to the effusion is compressed, and thrust towards the vertebral column and the top of the thorax, whilst the diaphragm, with the liver or the spleen, according to the side affected, are pushed downwards. When the effusion occupies the left side of the chest, if it is very abundant, it throws the heart towards the right side.

The causes of hydrothorax are those of dropsy in general. So that *active*

hydrothorax may be the consequence of a sudden suppression of the perspiration, or of some other secretion. *Passive* hydrothorax is met with in persons affected with a disease of the heart or of the large vessels, capable of opposing an impediment to the free circulation of the blood."

On the symptoms of hydrothorax we need not touch. Suffice it to observe, that it was very seldom a substantive complaint, unattended with some serious organic alteration, commonly of the heart or the great arteries. But, as Dr. Carbutt properly remarks, active hydrothorax is more frequently a complaint in itself than the passive form. The old ideas on the subject of hydrothorax are, we need not say, preposterous.

On ascites, we see nothing but the following observations to detain us.

"The *occasional* causes of *active* ascites are the same as those already mentioned in speaking of anasarca and hydrothorax. As for *passive* ascites, it used to be the fashion, and it no doubt is still the fashion, to assign a great number of occasional causes, which were considered sufficient to *debilitate* the lymphatic vessels, as the *atony* of those vessels, or their *debility*, was considered as the *proximate* cause of the disease. But it is time to have done with so unmeaning an hypothesis as *debility*, when we see patients die daily of debility without any symptoms of ascites, or any other species of dropsy: as in consumptions, gastro-enteritis, fevers, in which there is sufficient debility, but with an evident increase instead of a deficiency of absorption. The *proximate* cause of *passive* ascites is, like the proximate cause of *passive* general dropsy, the non-absorbing of the veins; the cause of this is some interruption to the circulation of blood along the veins; the cause of this I have already dwelt upon.

We are disposed to go to some extent with Dr. Carbutt, in repudiating the idea of mere debility doing so much mischief as it enjoys the credit of effecting. There is probably, in *most* cases, some efficient cause, which plays an important and immediate part in

the production of dropsical effusion. Whether this is so constantly to be looked for, or found in the veins, as Dr. Carbutt appears to believe, may, we think, admit of question. Yet the agency of general debility must not be overlooked. *That*, perhaps, occasions many functional and structural organic changes, which themselves give rise to dropsical effusions.

Dr. Carbutt presents ten cases of dropsy, mostly of a passive character, and affecting the abdomen and the limbs. We shall notice only one, for a particular point which it illustrates.

CASE 1.—*Passive Dropsy of the Belly and the Limbs.*

July 1, 1833. Margaret Kearney, aged 46, married, takes care of her house, has been ill for four months. Tongue is foul. Has a bad taste in her mouth. Bowels costive. Voids a very small quantity of urine. Belly is swelled, with a distinct fluctuation. There is pain over the hepatic region, and the liver seems enlarged. The legs and feet are swelled, and pit upon pressure. She has some difficulty in breathing, and a short cough. Pulse is rapid, small, and weak. No catamenia for four months past.

Dr. Carbutt put the patient upon digitalis, with occasional doses of castor oil. But the symptoms became worse rather than better—the stools continued clay-coloured—and the digitalis depressed the heart's action. On the 10th, it was omitted, and one grain of calomel night and morning, with two ounces of gin daily, were substituted for it. On the 13th the mouth was sore. The stools were still clay-coloured, and there was tenderness in the hepatic region. On the 16th, these symptoms were undiminished, and four ounces of blood were abstracted from the region of the liver by cupping. This measure greatly diminished the pain. On the 17th the swelling was less, the flow of urine greater—the stools unchanged in character. The mouth was so sore, that two teeth had dropped out.

To omit the calomel pills.

To continue the gin.

To take two grains of the *Pilula Aloës cum Myrrhâ* every hour whilst waking.

The bowels were well acted on by the aloetic pills, and on the 21st, the stools were more natural. On the 24th she was ordered a draught of infusion of *calumba* with carbonate of potass. On the 28th, the gin was increased to 4 ozs. daily. On the 31st, the stools were more bilious. On the 1st August, she was ordered a morphia draught, on account of want of sleep. On the 8th, the stools had become quite natural. We need not pursue the diurnal reports, for on the 19th, the patient was discharged cured.

We have taken the preceding case because it illustrates Dr. Carbutt's opinion respecting the action of aloes on the liver. We do not mean to deny to aloetic, what perhaps should be conceded to other purgatives, that directly or indirectly they may influence the liver in some slight degree; but, without appearing hypercritical we may observe, that in this instance the evidence is not so conclusive as to carry demonstration on its face. For, the biliary secretion was long in being established, and the post hoc is more certain from many considerations than the propter hoc. Dr. Carbutt, however, feels no doubt upon the subject, and it is fair to allow him to speak for himself.

"This, gentlemen," he says, or rather said, "was a case of passive dropsy from obstruction of the liver. As soon as we procured bilious stools, the urine became more plentiful, and the swellings disappeared. You find it reported towards the conclusion of the case that the urine became more scanty; but I apprehend that this remark originated in a slight mistake. As she was taking a small aloes pill every hour whilst waking, it is most likely that she voided a great part of her urine with her stools, which were numerous, and that therefore the quantity of her urine was not fully estimated. In this case you have seen put into practice the secret of which I told you in my lecture upon dropsy in general. You saw that this woman took calomel until

her mouth was very sore, and two unsound teeth dropped out; yet her stools continued clay-coloured. I omitted the calomel, and gave her a small aloetic pill every hour whilst waking; knowing that according to theory, the passing of this pill so frequently over the mouth of the *ductus communis choledochus*, must sooner or later rouse the liver to action; and consequently to the regular secretion of bile. For a week or two I was disappointed; but I still persevered, saying that the plan was rational. When our plans are rational, we ought to persevere: we cannot always command success; we must sometimes be content if we deserve it. At last the wished-for bile appeared; at which I honestly confess I felt more delight than I believe a sportsman does upon finding his game. 'Here is the triumph of theory!' I said to Mr. Lloyd. 'Sir,' replied he, 'I think it is the triumph of practice.' He was right; and we were both right. Good theory, and good practice, are one and indivisible. They are in fact the same thing. As long as you practise, gentlemen, always consider the why, and the wherefore. Ask yourselves what you intend to accomplish, what is your object, and then meditate most earnestly on what may be the rational mode of attaining that object. You had better, however, keep your theories to yourself, unless, like me at this moment, you have a public duty to perform."

We do not perceive any peculiar interest in the other cases. Yet they well deserve the attention of those, who are anxious, as all should be, to study facts. We therefore refer our readers to the volume in which they are contained.

LOCK HOSPITAL.

SOME CASES OF VENEREAL AFFECTIONS
OF THE FÆTUS AND OF CHILDREN.
BY H. J. JOHNSON, ESQ.

THE following brief memoranda of some cases may not be totally undeserving of

attention. I have few observations to offer on them, and would merely commend the subject of syphilitic affections communicated from the mother to her offspring, to the more deliberate consideration of the profession, than it appears to have hitherto received.

Case 1. A strong looking Irish-woman presented herself at the hospital, and brought with her her child then nearly three weeks old. She stated that she had been a patient in the hospital four or five years before, on account of a syphilitic complaint communicated to her by her husband. She was then pregnant. The syphilitic symptoms disappeared under the treatment employed, and she quitted the hospital, apparently cured. Soon after her dismissal, she was brought to bed of a still-born child, nearly at the full time. The fœtus was covered with blotches on the skin.

From that time the mother had had no venereal symptoms whatever, either of a primary or secondary character. She had become pregnant four times subsequently to the accouchement I have mentioned. On the two first occasions, the child was born dead, nearly at the full period, and each time it was covered with cutaneous blotches. The third pregnancy ended in the birth of a living child. It was born without any syphilitic symptoms, but in three weeks or thereabouts after birth, an eruption made its appearance, the child drooped rapidly, and soon died.

The fourth child was the one she brought with her to the hospital. It was very small and delicate, had slight ophthalmia neonatorum, but displayed no syphilitic taint. The mother was strong and apparently healthy, and, as I have already stated, she had had no secondary nor primary symptom for five years or upwards. She declared that she was confident the child would die as the last child had died.

In a month after this visit she returned to inform us that the child was dead. In a few days after she left the hospital an eruption, of a brown colour and a scaly character, appeared upon the infant; it emaciated with rapidity, and it shortly sank.

It is certainly a curious circumstance that successive infants should be thus affected by the syphilitic poison which would seem to have completely left the mother. The ova must have been poisoned. Perhaps the case of the mare that was covered by the quagga was analogous, in some respects to this— analogous, at least, in the fact of a temporary influence exerting an effect on more ova than those that were impregnated at the time that influence was exercised. A mare was covered by a quagga. The foal was striped, as might naturally have been anticipated. Subsequently the mare was covered by a stallion, and the foal again had the quagga stripe.

In the case of the woman I have mentioned, the influence on the ovum indeed was somewhat different. For in her it was not the influence of imagination, which might have done something in the instance of the mare; but the syphilitic poison, probably affected ova, which in after years were to be impregnated. At all events the facts are worth recording.

Case 2. When residing at the hospital as house surgeon, an out-patient brought her child for my inspection. She had been a patient in the hospital 12 months previously, on account of a sore upon the nympha. She was pregnant at the time. After remaining for two months in the hospital, and undergoing a course of mercury she was discharged apparently quite well. Five months after her dismissal she was confined. The child, a male, was healthy at the time of birth, and for five months after birth remained so. He then was affected with an eruption on the skin, for which the mother brought him to me as I have stated.

The eruption consisted of spots of what approaches nearer to the characters of the psoriasis guttata, than of any eruption sufficiently familiar to the bulk of the profession, to admit of being selected as an object of comparison. It was very general upon the trunk, not much diffused upon the limbs. The child's health was tolerably good, he was plump, and had no other symptom of a syphilitic character. The nature

of the eruption admitted of no doubt; it was unequivocally venereal.

I ordered some powders containing the hydrargyrus \bar{c} cretâ for the child, and prescribed sarsaparilla for the mother. The child, of course, was suckling, and I presume there can be no doubt of the advantage of giving the mercury to the infant in preference to the parent. For, if the mother takes it, two persons are subjected to its influence instead of one, a gratuitous injury—and, besides, the infant receives the mineral through the medium of the milk, its food, which is so far poisoned, instead of being the vehicle of wholesome nourishment. On the other hand, when mercury is given to the infant, and the mother is treated with sarsaparilla or with other tonics, her health is supported, and she offers to her child, what it surely must require, a supply of sound and generous nutriment.*

In the present case, the remedies so exhibited answered well. The eruption desquamated, faded, and disappeared—the child's health continued good—and the mother's was rather improved than otherwise. I continued the hydrargyrus \bar{c} cretâ for a month, indeed for rather more, and the mother persevered with the sarsaparilla for a longer time than that.

For two or three months after this occurrence I saw nothing of the parties. At the expiration of that period, the woman returned for my advice. The child was much emaciated, and at the verge of the anus on the right side was an ulcer, nearly as large as a sixpenny-piece. The base was indurated, the edges irregular and hard, the surface yellowish, the surrounding skin inflamed. In the left groin was a bubo, as large as a pigeon's egg, inflamed, and tender. The child was feverish, the secretions depraved.

I ordered salines, mild purgatives, and the warm bath. Under these means the local inflammation and the general

febrile symptoms subsided. I then directed the mother to take the sarsaparilla combined with very small doses of the oxymuriate of mercury. The child gradually improved—the ulcer healed, with hardness of the cicatrix—the bubo passed away—the induration of the cicatrix disappeared, and the child very slowly recovered flesh and strength. I saw it two or three months ago. It had small-pox, subsequent to vaccination, very severely in the interim. But it was now grown strong and plump, and no venereal affection was apparent.

It is singular that in the preceding case the child, which must necessarily have been infected in utero, should be born quite healthy, and remain so for five months after birth. It then displayed such secondary symptoms as are not unfrequent. I need say no more upon the mode of treatment, but perhaps I should remark, that when the ulceration near the anus and bubo made their appearance, the child was so debilitated and reduced, that there seemed little prospect of a permanent recovery.

One other observation, desultory as it is, may be permitted. It is not very uncommon for a patient to present some mild form of venereal eruption, psoriasis for instance, or lepra—to get rid of this under proper treatment—and soon afterwards to be affected with a worse kind of eruption, rupia perhaps, or cachectic ulcerations. If the patient is treated violently with mercury, or much reduced in any way during the continuance of the first eruption, this is frequent enough, and may be readily accounted for; but I mean to affirm, that where the patient is *not* reduced, where mercury is properly and mildly given, the circumstance alluded to occasionally occurs. Yet, so far as I have seen, rupia, or eczema, or cachectic ulcers so occurring, are much more tractable than where they follow the abuse of mercury, or some obvious debilitating cause.

* Of course this reasoning is inapplicable to cases, in which the mother is labouring at the time under syphilitic symptoms. Then to treat her, is to treat the child also.

Case 3. In March of the present year, I was requested to see the child of the wife of an opulent tradesman. The child was eleven months of age.

At the commissure of the penis and scrotum was a small yellowish brown

spot, with some thickening of the cutis, and a disposition to the formation of a pustule. A similar spot was present on the inferior surface of the scrotum. The tonsils were rather larger than they should be. The child was delicate in its appearance, but its health was good.

The following is the history of the case of the mother and child. In 1833, the mother had been infected by her husband, and suffered from a primary sore of the labium. For this she took mercury, and was under its influence for nearly five months. During the last month of this time the extremity of the nose had been the seat of and indeed was destroyed by an ulcer, which commenced as a pustule with an inflamed areola. It was at this period and in this condition that I first saw the patient. I ordered sarsaparilla in full doses—the ulceration of the nose healed up, without attacking the nasal bones—and the patient was to all appearance cured. Three or four months after this I again saw her. This was in September 1833. She had then an eruption of brownish red spots, inclined to vesication, and she had also slight ulceration of the nymphæ, which had evidently originated in a spot of secondary ulceration. I again ordered the patient sarsaparilla combined with occasional aperients. The eruption lasted more or less till June 1834. From that time to the present, upwards of twelve months, the mother has continued well, and is now in robust health. When she first came under my observation she appeared in a very precarious condition.

In April, 1834, the mother then suffering under the eruption already mentioned, was confined and gave birth to a male child. At birth, it was to all appearance healthy, but in ten days afterwards a "scabb'd eruption occurred upon the face, and "red spots" covered the body. I had not an opportunity of seeing the child at this period; it was treated by another surgeon. He ordered "blue powders," which the child took every night for three months. The eruption lasted two months from the time of its commencement. The child continued well until it was six months old, when another eruption

occurred of "red spots," attended with general loss of the nails. This lasted for six weeks, during which the child was taking a "white powder," under the direction of the surgeon who had treated it before.

The two spots for which the child was now brought to me, had lasted for two weeks, and were increasing in dimensions.

I now prescribed,

Hyd. c. cret. gr. i. Pulv. cret. comp.
gr. ij. Omni nocte, pro infante,

and gave the mother some sarsaparilla; she was still suckling the child. The spots on the latter disappeared in about a fortnight, and all stain disappeared also. The health of both mother and child was good, and after about a month, I discontinued all medicines for both. I saw the child a few days ago, and it continued free from all venereal symptoms.

These cases are offered with few or no comments. They are the simple statements of facts comparatively unconnected. Perhaps they tend to shew the influence of treatment on the secondary syphilitic eruptions of infants; and perhaps they also tend to illustrate the advantage of maintaining as good a supply of healthy milk as possible from the mother to the child, while the latter is undergoing the remedies adapted to the specific symptoms it displays.

ST. GEORGE'S HOSPITAL.

In the last Number but one of this Journal, we seized the opportunity of offering a few remarks on the principle of appointing several assistant surgeons to hospitals. We shewed, or at least we endeavoured to shew, that such a principle is founded in liberality, expediency and justice: and that the limitation of the number is exactly in the ratio of the limit laid down, an approach to the spirit of monopoly. The object of those who administer the affairs of our medical charities should be to train up efficient medical officers, by holding out encouragement, and a prospect of

reward, to the most industrious and most talented young men. In a practical science, like that of medicine, physicians and surgeons are not to be obtained ready-made, of any quality. They must serve a long apprenticeship of exercise and study, not the study of books, nor even of lectures, but of the human body. They must early have the opportunity of treating cases, and of acquiring the tact that long-continued practice only can confer. It is on this account that so many of our military and naval surgeons have succeeded in civil practice to a remarkable degree, although they have "set up" late in life—perhaps with little interest, and with many disadvantages. It is on this account, too, that many gentlemen, who have lived in London, and practised privately, have failed as hospital surgeons and physicians, when those appointments have not been obtained at an early period of their career.

There cannot be a doubt in the mind of any unprejudiced person, that the opportunities afforded to young men, for gradually acquiring the habit of *treating* disease, should be abundant—as abundant as by possibility they can be made. They encourage industry, give a field to exertion, exhibit talent, and rear a class of practical men, for the benefit, not only of the poor but of the rich. The matter will not bear questioning for one moment—the point is as clear as that the sides of an equilateral triangle are equal. There is nothing to be urged against it but private interest; and, at this time of day, such an argument is most dangerous to the man that wields it. We, therefore, advocated the appointment of two assistant surgeons to St. George's Hospital, in lieu of only one—the governors of the hospital took the same liberal view of the case—and the public, the medical public we mean, must rejoice in this triumph of the utilitarian principle:—the greatest good to the greatest number.

As governors of the institution, we have been lately summoned to its board-room, to take into consideration a code of laws, for the regulation of the cha-

rity, proposed by a committee formally appointed. We observe much discussion on the subject of these laws in some of our weekly contemporaries. The *Lancet* has sharply attacked the law, as well as the committee from which they emanated. Having looked at the matter with as much deliberation and as much judgment as we are capable of exercising, we are disposed to think that the *Lancet* has been misinformed, both as to the nature and the tendency of those laws. We really can discover no leaning on the part of those who framed them, nor any obvious bias in the laws themselves, towards the interests of the medical officers of the hospital. On the contrary they appeared and still appear to us to be well calculated, on the whole, to promote the well-being, and good management of the institution. We have therefore at some personal trouble supported them by our private votes, and we have no objection to give them our support also as public journalists. Setting aside prejudice and some degree of clamour, we really and conscientiously think that the laws in question are extremely good. There is one fault perceptible enough in their composition—a trivial one perhaps, yet one which might be advantageously amended—we allude to the occasional difficulty experienced on the part of the puzzled reader, in distinguishing the language in which they have been written. English it certainly is not, at least sundry sentences display an independent spirit of diction which sets at defiance the cramped and sullen rules of Murray.

But our readers can take little real interest in the affairs of St. George's Hospital, except when they bear upon some question of general policy or usefulness. The only one to which it is at present worth while to allude, is a law which was proposed, and which indeed has been almost unanimously carried, to admit of the expulsion of any governor proved to be unworthy.

It has been urged that it is dangerous to give the governors the power of expulsion from amongst them, of any member of their body. But surely

this is a monstrous doctrine. There is not a pot-house club in the kingdom—there is scarcely a respectable or aristocratic association, whether for the purposes of usefulness or pleasure, which has not the right of expelling one who injures or disgraces it. And is St. George's Hospital to be destitute of this wholesome and salutary power—is it to be debarred from excluding from its board-room a scoundrel or a felon? The idea is too preposterous to require refutation. Any body of men that enjoy the right of election of their members, should also possess the power of expulsion; that is clear in point of principle, and almost universally acted on in practice. The Governors of St. George's Hospital cannot be blamed for demanding a power of which they should never have been deprived.

No one then can deny the justice of a public body being invested with the privilege of turning out an improper member. The great point is to guard against the possibility of abuse—to prevent any party from making use of this common weapon for their private purposes. The great check against an abuse of this description is publicity. The whole process of expulsion from first to last should be as public as it possibly can be. It has been urged against publicity that it is not mercy to the accused or guilty party. Mercy, however, must yield to justice. The great object is to guard against the abuse of power, to prevent parties from crushing individuals. It is more likely that such abuse should be perpetrated under the protection of privacy, than that innocent persons should suffer from publicity, or that public morality should be shocked by it. The advantages of publicity more than counteract its evils. This is the great principle of modern legislation.

In the first instance, it was proposed by the Committee that the Weekly Board

should possess the power of expelling a governor for obvious misconduct. The expulsion must be confirmed at the ensuing weekly Board, and the individual implicated had the power of appeal to the General Quarterly Court. This proceeding was adopted to avoid extreme publicity, yet to offer, at the same time, the advantages of a double appeal to the accused. To this law the *Lancet* directed the indignant attention of the public. We think the anger and indignation of our contemporaries were overstrained; we think there was no necessity nor foundation for making the law the subject of direct attack on the Committee; but, we also think that the law was not a good one, that the mode of expulsion was not attended with sufficient publicity, nor guarded so strictly as it ought to be against abuse.

We were therefore inclined to oppose this law, when we found, with much pleasure that the medical officers took this view of the question themselves, and brought forward a distinct proposition to permit the expulsion of a governor of the Institution at a Special Court, and a Special Court only. That governor might previously resign if he thought fit—a humane provision to him, and a proper one for the purpose of avoiding scandal to the public.

Thus the matter has been settled to the satisfaction of every liberal and independent person. We must say that we consider the conduct of the medical officers of the Institution candid, and gentlemanly in every respect, and we, as governors, in this instance perfectly unprejudiced, see no ground for dissatisfaction at the course they have pursued. Nay, we fancy that the Editor of the *Lancet*, on consideration, will perceive that he has been led away throughout the whole discussion, by persons who have been misinformed with respect to the state of affairs at the Hospital.

MISCELLANIES.

CASE OF DOUBTFUL TUMOUR ON THE THIGH. By Mr. ROBERT HOWARD, of Heptonstal, Yorkshire.

On April the 4th Mr. H. was desired to

visit a young woman of the name of Helewell, of a strumous constitution.

On entering her room he was shown a tumour, about the size of a new born child's head; its dimensions appeared

enormous; it occupied the upper portion of the thigh, its inferior margin seemed to terminate about where the lower edge of the sartorius muscle crosses the rectus femoris, laterally it extended from the vastus externus nearly to the gracilis, and superiorly it extended to the vicinity of Poupart's ligament. It was not a circumscribed tumour; but, on the contrary, was diffused, and unequal in its margin; in one place passing beyond the edge next to it, which gave it a peculiarly uneven appearance.

History of the Case.—Betty Helewel has been in the service of the Rev. Mr. Bentham, for the space of four years; and during the last 12 months of her service she was in a state of indisposition, the symptoms which manifested themselves, being debility, nausea, languor, paleness of the face, and occasionally pains about the sternum, accompanied by frequent chilliness, and constipation in the bowels.

Early after her arrival home, the catamenia became irregular, and the former symptoms became aggravated; another class of symptoms also made their appearance, viz. vertigo, palpitation of the heart and dyspepsia. She was also frequently troubled with a sense of weight at the inferior part of the abdomen. She has now been at home about two years. During the first eleven months, the catamenia were irregular; and during the subsequent twelve months, a complete suppression has existed.

Seven months ago, when the tumour was of small size, she felt pulsation in it, but not pain. It was less at one time than another, and occasionally it seemed almost to disappear. She several times noticed that, after a night's rest, it would become perceptibly diminished in size, but cannot say whether it would have receded or not by pressure.

From this period, it gradually enlarged, but she felt actually no pain, and it extended itself in an oblong direction, the pulsation in it became sensibly less, and for several months has not been perceptible.

On April the 4th I first examined the tumour, there was upon pressure a marked fluctuation, but pressure communicated no pain, she could bear almost any degree of pressure without complaining, and the tumour seemed in some degree to recede upon pressure, and the pressure removed, it obviously resumed its former magnitude.

Peculiarities of the Tumour at its greatest magnitude.—It has been previously observed that the margins of the tumour were irregular; it was moreover oblong, and in some degree seemed to follow the track of the femoral artery; the apex was not conical or pointed, but broad; about the centre of the top of the tumour there was slight discoloration, and a slough was forming. It receded, in some degree, on pressure. Slight pain was felt in the swelling, but, its temperature was not increased beyond that of the corresponding thigh. She could with facility have performed any duty in the house, had not the magnitude of the tumour been an impediment, no symptomatic fever manifested itself, and her nocturnal repose was not disturbed by the tumour.

She felt at this period no pulsation in the tumour. With symptoms so equivocal, with a tumour situated upon the course of the femoral artery; and taking into consideration the other concomitant circumstances, would it have been prudent to have made an opening into the tumour?

1st. Is it an abscess arising from a scrofulous affection of the lymphatics of the thigh?

2nd. Is it a diffused aneurism of the femoral artery?

3rd. Is it a critical abscess?

We need not detail Mr. Howard's speculations on these points, for the following reason.

On the 18th of this month the tumour burst, and I believe not less than five gills of a fluid were discharged. It was serous, and of a moderate red colour; indeed it much resembled the fluid parted with during menstruation; the smell was not particularly offensive, and some two or three times I had portions of matter to remove from the orifice

by the forceps; they were of a cheese colour, and about the consistence of the coagulable lymph of the blood.

Up to the present time (April the 28th) not one unfavourable symptom has developed itself, and to all appearance the orifice will soon be healed. I may here add, that a degree of pressure is kept upon the part by means of a linen roller, passed around the body and down the thigh.

P.S.—*April 20th.* Her pulse are almost natural, her appetite is good, and her rest is refreshing; the symptoms enumerated in the early part of this paper have disappeared, and her complexion is much improved, whilst at the same time, her countenance indicates the return of health.

ACALEPHÆ.

In the first number of the new Cyclopædia of Anatomy and Physiology (a work which we think, commences with very fair prospects of success) there is an interesting account of a very curious class of animated beings, holding a very low grade in the extensive scale of creation, yet exciting the wonder of the anatomist and the naturalist, much more than higher links in the chain of God's works. This is the ACALEPHÆ, or sea-jelly, sea-nettle, Portuguese man of war, &c. known from the property which many of the animals possess of stinging those parts of our body which come in contact with them. We can only make room for a short extract, to shew the manner in which Dr. Coldstream has handled his subject in this article.

"On many accounts the acalephæ are objects of extreme interest to the anatomist and physiologist. They have occupied the attention of the most learned naturalists of every age, from the time of Pliny until the present day; their numbers are, perhaps, greater than those of any other class of marine animals: they exist in all seas; and yet we remain very ignorant with regard to several points in their structure and history. The peculiar nature of their

tissues, the singular arrangements of their organs, the anomalies in their functions, present as many objects of interesting inquiry to the physiologist, as the wonderful variety and striking elegance of their forms, and their splendid colouring present to the admiration of the naturalist. Peron, in his animated description of the *Medusa*, observes, 'among the animals of this family we find the most important functions of life performed in bodies which offer to the eye little more than a mass of jelly. They grow frequently to a large size, so as to measure several feet in diameter; and yet we cannot always determine what are their organs of nutrition. They move with rapidity, and continue their motions for a long time; and yet we cannot always satisfactorily demonstrate their muscular system. Their secretions are frequently very abundant, and yet the secreting organs remain to be discovered. They seem to be too weak to seize any vigorous animal, and yet fishes are sometimes their prey. Their delicate stomachs appear to be wholly incapable of acting upon such food, and yet it is digested within a very short time. Most of them shine at night with great brilliancy, and yet we know little or nothing of the nature of the agent which produces so remarkable an effect, or of the organs by which it is elaborated. And, lastly, many of them sting the hand which touches them; but how, or by what means, they do so still remains a mystery.' It is, therefore, but a very imperfect account of the anatomy and physiology of this class that can be at present given."

The anatomy of the various species is illustrated by numerous wood-cuts, and the researches of Dr. Coldstream are very creditable to himself and the work to which he contributes.

ON THE NUMBER OF THE PULSATIONS OF THE HEART IN THE FÆTUS BY G. O. FLEMING. M. D. F. L. S. Physician Accoucheur to the Pancras Infirmary.

I have reason to think that the account given of the number of pulsations of

the heart in the fœtus, by Laennec and M. Kergaradec is erroneous. These observers speak of a number of *double pulsations* double the number of the pulse of the mother. I listened to the fœtal heart with F. Cumin, during my late residence in Glasgow, and found the number of pulsations to be 140. But these were not *double* but *single* pulsations; and, from a subsequent observation, I am now persuaded that each two pulsations were, in fact, one *double pulsation*; and on a recent occasion, I had an opportunity of counting the pulse in an infant just born, but which had not breathed; it was 70. The moment gasping and breathing took place, the pulse became much quicker; it was irregular at first, but soon became 140 in a minute.

I think we may conclude from these facts, that the fetal pulse is doubled immediately upon the perfect establishment of respiration.

May 30, 1835.

MEDICAL ASSOCIATIONS.

We perceive that a plan is in process of organization, in several counties, and will, doubtless, be followed out in all, of forming associations of all descriptions of medical practitioners, for the avowed purpose of maintaining the respectability of the profession, and preventing or discouraging degradation of it by members who are more solicitous of acquiring a wretched subsistence than of adding or supporting the dignity of a liberal profession. At all times there were some medical men who evinced no very nice sense of distinction between trade and science. But now, the distinction is likely to be entirely obliterated by the competition which is excited, or being called forth by the system of "farming the poor" in the doctoring way, in the same style as contracts for biscuit and salt pork used to be advertised during the war—and precious supplies of these articles were the consequence!! Many a legion of poor seamen went to an untimely and watery grave by the villainous contracts for cheap provisions; yet still there was

something like reason and justice in advertising for articles, in order that the lowest bidder might have the contract. But when this principle is applied to medical skill and attention, as well as to the very drugs which are employed, it "bangs bannagher," as the facetious O'Connell says, and were not the subject of a most serious, not to say melancholy nature, we would be inclined to laugh at the proposition, as the offspring of some lunatic imagination. It is, however, but too true, and will continue, unless commissioners and church-wardens are shamed out of the system by the general expression of indignation among all the respectable orders of medical society. We cannot, therefore, permit this number of the Journal to go forth, without expressing our approbation of the associations which are now forming, and of encouraging the formation of others, where plans are not yet in progress of organization. The following resolutions adopted by the medical association in Kent, may serve as a model, or at least an example, for the resolutions of other countries.

RESOLUTIONS.

"1. That the system of parishes contracting for attendance upon their sick poor, is in principle highly objectionable, and practically injurious, both to medical men and their pauper patients, *unless a fair remuneration be given, on the principle of Friendly Societies, as framed by the Rev. J. T. Beecher, of Southwell.*

2. That the continuance of that system, under the direction of the new poor law commissioners, is viewed with deep regret by this meeting.

3. That the terms for medical attendance upon, and furnishing medicines to the sick poor, proposed by the guardians of several unions recently formed in the eastern division of this county, are by no means proportionate to the duties required of medical officers by the commissioners, and to the expense, and moral and legal responsibility, they must necessarily incur.

4. That it appears to this meeting that the other salaried officers, under

the new poor law act, from commissioners downwards, are far more liberally paid, in proportion to the duties assigned them and their rank, than it is proposed to pay the parochial medical officers.

5. That in adopting the foregoing resolutions, the members of the medical profession here present are actuated not merely by the desire of maintaining the just interests and the dignity of the profession, but also of consulting the interest of the rate-payer, as well as the benefit of their poorer neighbours.

Lastly, That an association be formed, to be called the East Kent Medical Association. That the principal objects of this association be to preserve the privileges and support the credit of surgeons and apothecaries, to promote fair and liberal practice, and prevent abuses in the profession; and to adopt such measures as may appear best calculated to effect those ends."

MEDICAL REFORM.

We have not amused ourselves or our readers of late, with any of the numerous rumours, intelligence, &c. &c. so liberally scattered among the public by the press, respecting *internal* reforms in certain great bodies. It is now pretty evident that they were all "baseless fabrics of a vision." We never expect a liberal reformation spontaneously

adopted in any one of our medical establishments; and therefore we are not at all sorry that the attempts to blind us with abortive plans, that would confer no real benefit on the profession at large, have vanished into air—thin air. The great events that are now engaging the attention of legislators will, in all probability prevent any parliamentary measures being entertained on the subject of medical reform during the present year. The *stationaries* may construe this procrastination (and we have no doubt that they will do so) into a final abandonment of all legislative interference with the present order of things in the republic of medicine. In the minds of most others, however, it will appear tolerably probable that the sweeping reform which is about to take place in municipal corporation, will not leave the medical corporations very long as anomalies in the municipal code. But should the legislature defer, for some years, the expected amelioration of our medical laws and institutions, the rapid growth of public opinion will render the final result not the less certain because it is delayed. We have little doubt, in the mean time, that Mr. Warburton is *digesting* his plan of reform, and that, in due and good time, it will be brought under the consideration of Parliament. All pretended codes and regulations so confidently prognosticated by several of our contemporaries, are, "*voces et preterea nihil.*"

BIBLIOGRAPHICAL RECORD;

OR,

Works received for Review since last Quarter.

1. Consumption, why so fatal? &c. By JOHN TYRELL. Octavo, pp. 112. Renshaw, April, 1835.

2. Principles of the treatment of Gout, with a further Examination of the Effects of Colchicum, &c. By Sir CHARLES SCU-

DAMORE, M. D. F.R.S. &c. Octavo, pp. 54. Longman and Co. 1835.

3. The Constitution of Man, considered in relation to external Objects. By GEO. COMBE. Second Edition, corrected and enlarged, April, 1835.

4 Chemical Attraction. An Essay in

Five Chapters, with an Historical Introduction, and several Illustrative Tables. By GILBERT LANGDON HUME, of Corpus Christi College, Cambridge. Octavo, pp. 176. Cambridge, 1835.

5. A few practical Observations on the Art of Cupping. By JOSEPH STAPLES, Cupper, &c. Duodecimo, pp. 72. Longman and Co. April, 1835.

Concise and practical, the author, according to his motto (ne sutor ultra crepidam,) not stepping beyond his just boundary.

6. A Manual of Experiments, illustrative of Chemical Science, &c. By JOHN MURRAY, F.S.A. F.L.S. &c. Fourth Edition, 12mo. Renshaw, 1834.

7. A Therapeutic Arrangement and Syllabus of Materia Medica. By JAMES JOHNSTONE, M.D. Fellow of the College of Physicians, and Physician to the General Hospital, Birmingham. Duodecimo, pp. 84. Renshaw, London, 1835.

Although intended more especially for the Birmingham students, this little manual appears calculated to facilitate the study of materia medica and therapeutics every where.

8. A Dictionary of Practical Medicine, &c. By JAMES COPLAND, M.D. Part III. Octavo, pp. 641 to 690. April, 1835.

This Part contains DROPSY and FEVER, inclusive; and maintains its reputation for great research, indefatigable labour, and sound judgment.

The Clinique Medicale; or Reports of Medical Cases. By G. ANDRAL: condensed and translated, with Observations extracted from the Writings of the most distinguished Authors. By D. SPILLAN, M.D. &c. Part I. Diseases of the Encephalon. Octavo, pp. 216, very small type, price 5s. Renshaw, May, 1835.

The value of the original will be appreciated by our readers, from the reviews we have given of it. The translation is admirably condensed, and enriched by valuable notes.

10. A Series of Twenty-eight Plates, illustrating the Causes of Displacement in the various Fractures of the Extremities. By G. W. HIND, M.R.C.S. formerly House-Surgeon to the Middlesex Hospital. Quarto, 1835.

11. The Transactions of the Provincial Medical and Surgical Association, instituted 1832. Volume the third, 8vo, pp. 472, with a Plate, Sherwood and Co. June, 1835.

To be noticed fully in our next Number.

12. Phrenology in connexion with the Study of Physiognomy. By S. G. SPURZHEIM, M.D. Illustration of Characters, with 35 Plates. Second American Edition, improved; to which is prefixed a Biography of the Author, by NAHUM CAPEN. Octavo, pp. 367. Boston, 1834.

This is a very valuable work, especially as relates to the biography of that great and good man—SPURZHEIM.

13. Observations on Mental Derangement, being an application of the Principles of Phrenology to the Elucidation of the Causes, Symptoms, Nature, and Treatment of Insanity. By ANDREW COMBE, M.D. First American Edition, with Notes and Bibliography, by an American Physician. Octavo, pp. 336. Boston, 1834.

Dr. Combe will be gratified to find his work reprinted and improved in the Land of Columbus.

14. Thoughts on Quarantine, and other Sanitary Systems—an Essay which received the Prize of the Boylston Medical Committee of Harvard University, in August, 1834. By CHARLES CALDWELL, M.D. Octavo, pp. 72. Boston, 1834.

Dr. C. has here given the quarantine system a severe blow; and, as that system is tottering, and must ultimately fall, the author of this brochure has, unquestionably, driven a nail into the coffin of the antique monster.

15. Observations on the Heart, and on the Peculiarities of the Fœtus. By JAMES JEFFRAY, M.D. Professor of Anatomy in the University of Glasgow. Octavo, pp. 112, seventeen Plates. Glasgow, 1835.

16. Observations on Atmospheric Influence, chiefly in reference to the Climate and Diseases of Eastern Regions. In five Parts—Part I. By W. AINSLIE, M.D.

This able Paper is published in a highly useful and well-conducted journal, "the JOURNAL OF THE ROYAL ASIATIC

SOCIETY"—a work which we strongly recommend to our readers—at least, to all those who are interested in oriental matters.

17. The Cyclopædia of Anatomy and Physiology. Edited by ROBERT B. TODD, M.B. Lectures on Anatomy and Physiology at the Westminster School of Medicine, &c. Part the First (to be continued every second Month.) Royal 8vo, pp. 112, with numerous Wood-cuts and Engravings, price five shillings. Sherwood and Co. June, 1835.

☞ This Part contains ABDOMEN (Dr. Todd)—ABSORPTION (Dr. Bostock)—ACALEPHÆ (Dr. Coldstream)—ACIDS, ANIMAL (W. T. Brande)—ACRITA (R. Owen)—ADHESION (B. Phillips)—ADIPOCIRE W. T. Brande)—ADIPOSE TISSUE (Dr. Craigie)—AGE (Dr. Symonds)—ALBINO (Dr. Bostock)—ALBUMEN (W. T. Brande)—AMPHIBIA (T. Bell)—ANIMAL KINGDOM (Dr. Grant.)

As we did not receive this fasciculus till the 4th of June, we could not take particular notice of it in the present Number of the Journal. We read with great attention the article AGE (with which we have had a longer acquaintance than most OLD WOMEN, like ourselves, are prone to acknowledge,) and we can vouch for one good article in the present Part, at least. We have glanced at some of the others; and we have no hesitation in prognosticating a most successful issue to the present undertaking, if continued in the same spirit with which it has commenced. When the Cyclopædia of Surgery (commencing under the auspices of Mr. Costello) shall have been added to the list, we augur a successful competition with our Continental neighbours, in this department of popular medical science.

18. On the Medical Properties of the Natural Order of Ranunculaceæ, more especially on the Uses of the Sabadilla, &c. By A. TURNBULL, M.D. Octavo. pp. 171. 1835.

19. An Essay on Artificial Teeth, Obturators, and Plates, with Principles for their Construction and Application, illustrated by twenty-six Cases—twenty-one Plates. By LEONARD KOECKER, Surgeon-Dentist, Doctor in Medicine and Surgery, &c. Octavo, pp. 194, 1835. Highley, Fleet-street.

☞ We know Mr. Koecker to be a very scientific and expert dentist—and, therefore, we have no doubt but that his observations, in this volume, will prove very serviceable to

those who devote their studies to the dental part of surgery. "The object he has in view is twofold:—First, an endeavour to facilitate the labours of his professional brethren—and, secondly, to give that information to the general reader, which will guard him from becoming the dupe of deception and imposture." As Mr. Koecker excels in the dexterity with which he combines science and mechanics, we have no doubt that his strictures on the charlatanism of the lower order of dentists are just, though severe.

20. A Paper on Renal Dropsy, illustrated by Cases and Dissections; read before the Senior Physical Society of Guy's Hospital on the 7th February, 1835. By JOHN ANDERSON (late Clinical Clerk, Guy's). Octavo, pp. 14, 1835.

☞ This paper, which has already appeared in the Medical Gazette, is very creditable to Mr. Anderson. We shall make some extracts from it in our next Number.

21. A Formulary for the Preparations and Medicinal Administration of certain new Remedies. Translated from the French of M. MAGENDIE, with Annotations and additional Articles, by JAS. MANBY GULLY, M.D. Small 8vo, pp. 216. Churchill, London, June, 1835.

22. Obstetric Tables; comprising Graphic Illustrations, with Descriptions and Practical Remarks, exhibiting, on dissected Plates, many important Subjects in Midwifery. By G. SPRATT, Surgeon-Accoucheur. Second Edition, considerably enlarged and improved, in two Parts—Part the First, quarto, with six dissected Plates. Churchill, June, 1835.

☞ As the work is dedicated, by permission, to Sir C. M. Clarke, who examined the Plates, and "suggested many improvements," we have the very best authority for their merits and utility.

23. A Theoretical and Practical Treatise on the Diseases of the Skin. By P. RAYER, M.D. Physician to the Hôpital de la Charité, &c. The second Edition, entirely remodelled, with an Atlas, in Royal 4to, of 26 Copper Plates, containing four hundred Figures, coloured. One large volume of Letter-press, pp. 1238. Baillière, June, 1835.

☞ This is an incomparable work on cutaneous diseases. It will be reviewed in our next. Some notes are added by the translator, Dr. Willis.

EXTRA-LIMITES.

REGULATIONS to be observed by Students intending to qualify themselves to practise as Apothecaries in England and Wales.*

APOTHECARIES' HALL, LONDON,
April 23, 1835.

THE Court of Examiners of the SOCIETY OF APOTHECARIES OF LONDON have witnessed with great satisfaction the benefits derived from the course of study enjoined by them, in the increased acquirements of the Candidates who present themselves for Examination; and being assured that the time is arrived when it behoves them to complete the scheme which they have long had in view, and to which they have advanced by successive and cautious steps, they now publish an extended course of study, which although it may perhaps require hereafter some modification in the details, may be considered, both in extent and duration, as final.

In prolonging the period of study, the Court feel confident that they are consulting the interests of the public, and that they are also acting in accordance with the wishes of the Profession generally, and more especially of the enlightened body of gentlemen engaged in teaching medicine and the various sciences connected therewith, who have, for some time past, expressed their sense of the great advantages which would result from a systematic arrangement of the Sessions at the Medical Schools, and of the particular subjects of study appropriate for the Winter and Summer seasons. The Court will be solicitous to lessen whatever inconvenience may, in the first instance, be attendant upon this important change; and they will be ready to pay attention to the cases of such Students as may be prevented by peculiar circumstances from commencing their attendance at the Schools in the early part of October, the period of the year at which it is most especially desirable that such attendance should, in future, commence.

The liberality of the Physicians of the London Hospitals in promptly acceding to the wishes of the Court, that Students might have afforded to them a more extended opportunity of studying Practical Medicine without any augmentation of expense, has enabled the Court to require an attendance of the Student for eighteen months at an Hospital instead of twelve; and to this boon the Physicians would add a yet more essential service by inducing the Governors of the Hospitals with which they are connected, to re-organise their respective out-patient establishments, and afford to Students an opportunity of studying large and important classes of disease, which are very rarely admitted within the wards of an Hospital.†

The great advantages which Students have derived from a regular course of periodic examinations, in the schools in which this system has been adopted, associated with a systematic and combined course of reading and oral instruction, induce the Court again to press this subject especially upon the attention of Teachers. The use of a class-book also, for each particular branch of study, would better enable the Student to reduce into order the numerous facts placed before him, and to refer again and again to such points as require a sustained exercise of the powers of reasoning, for their full and clear comprehension.

* This document is so important, and affecting interests so very widely, that we have deemed it proper to give it entire, as it will be referred to by all practitioners throughout the empire.—*Ed.*

† It appears by the Parliamentary Tables, that more than one half of the deaths which annually take place, are those of children under five, and of the aged, above seventy years of age. The diseases of these two classes, and those of women in the pregnant and puerperal state, cannot be studied at Hospitals, as they are now constituted.

The Legislature having made an apprenticeship of five years imperative upon all students, and having permitted them to present themselves for examination at the age of twenty-one, obviously intended that the greater part of their medical education should be included within that period: and the Court have great pleasure in stating, that in very many instances Students have actually completed their course of study, and have been admitted to an examination, within a few weeks after the termination of their apprenticeship. It is, however, to be regretted that this advantage has frequently been lost sight of, and that a great proportion of this valuable time, and not unfrequently the whole term of it, has been passed exclusively in practical Pharmacy. The Court are desirous of impressing upon parents the necessity of preventing this waste of time, by making such arrangements with practitioners with whom they place their sons, as may enable the young men to commence their attendance upon Lectures in the course of the third year of their apprenticeship.

The Court renew their recommendation that the apprenticeship should not begin until the youth has attained his seventeenth year, that he should previously have received a sound classical education, have been instructed in the elements of Mathematics and Natural Philosophy, and have acquired a knowledge of the French, and, if possible, the German languages.

The period of apprenticeship is by no means to be considered as of small importance; during that time it is incumbent upon the Master to take care that his apprentice keeps up and extends, by a regular course of reading, both his classical and general knowledge; it is also his duty to ascertain, by occasional examinations, that his pupil is acquiring the elements of professional knowledge; and that he becomes acquainted with the nomenclature of the profession, the manipulations of Pharmacy, and the elements of Osteology; whilst opportunities should be afforded him of watching the progress of disease, and of noticing the effects of remedies.

The Court have reason to believe, that students would in many instances gladly avail themselves of an opportunity of passing their Latin examination upon the commencement of their studies at the Medical Schools; the Court have, therefore, arranged a plan for that purpose which may be adopted at the option of the student, at the time of registering his first attendance upon Lectures. After this preliminary examination in Latin has been satisfactorily passed, the Student will not be subjected to any farther examination in Latin medical classics.

The Court of Examiners have only to add, that they have framed the following course of study with especial reference to the surgical as well as medical duties which devolve upon the general practitioner when engaged in practice, and with the knowledge that Students, with few exceptions, pass an examination in Surgery at the Royal College of Surgeons, as well as one in Medicine at the Hall: the Court have, therefore, taken care to afford every facility for a strict conformity with the regulations of the College, as well as with those which they have themselves enjoined. The Court exhort Students not to rest satisfied with a mere formal compliance with the injunctions of authority, but to be actuated by still higher motives, and to find in these an incentive to a zealous and generous devotion of their time, their labour, and their best faculties, to the acquisition of an accurate and comprehensive knowledge of the principles of the healing art.

EVERY CANDIDATE FOR A CERTIFICATE TO PRACTISE AS AN APOTHECARY, WILL BE REQUIRED TO PRODUCE TESTIMONIALS.

***OF HAVING SERVED AN APPRENTICESHIP OF NOT LESS THAN FIVE YEARS TO AN APOTHECARY:**

* No gentleman practising as an Apothecary in *England or Wales* can give his apprentice a legal title to examination, unless he is himself legally qualified to practise as an Apothecary, either by having been in practice prior to or on the 1st of August, 1815, or by having received a certificate of his qualification from the Court of Examiners. An apprenticeship for not less than five years to Surgeons practising as *Apothecaries* in Scotland and Ireland, gives to the apprentice a title to be admitted to examination.

* OF HAVING ATTAINED THE FULL AGE OF TWENTY-ONE YEARS :

† AND OF GOOD MORAL CONDUCT.

STUDENTS WHOSE ATTENDANCE ON LECTURES SHALL COMMENCE ON OR AFTER THE FIRST OF OCTOBER, 1835, WILL ALSO BE REQUIRED TO PRODUCE PROOF OF HAVING ATTENDED, DURING THREE WINTER AND TWO SUMMER SESSIONS, LECTURES IN THE FOLLOWING ORDER, AND MEDICAL PRACTICE FROM THE COMMENCEMENT OF THE SECOND, TO THE TERMINATION OF THE THIRD WINTER SESSION.

The WINTER Medical Session is to be understood as commencing on the first of October, and terminating in the middle of April, with a recess of fourteen days at Christmas : the SUMMER Session as commencing on the first of May, and ending on the thirty-first of July.

FIRST WINTER SESSION.	{ Chemistry. Anatomy and Physiology. Anatomical Demonstrations. Materia Medica and Therapeutics.
FIRST SUMMER SESSION.	{ Botany ; And such other branches of study as may improve the student's general education.
SECOND WINTER SESSION.	{ Anatomy and Physiology. Anatomical Demonstrations. Dissections. Principles and Practice of Medicine. Medical Practice of an Hospital.
SECOND SUMMER SESSION.	{ Botany, if not attended during the First Summer Session. Midwifery and Diseases of Women and Children. Forensic Medicine. Medical Practice of an Hospital.
THIRD WINTER SESSION.	{ Dissections. Principles and Practice of Medicine. Midwifery with attendance on cases. Medical Practice of an Hospital or Dispensary.

The Student is required to attend the Medical Practice of a recognised Hospital, from the commencement of the Second Winter to the termination of the Second Summer Session, and from that time to the end of the Third Winter Session, at an Hospital, or recognised Dispensary.

The sessional course of instruction in each respective subject of study, is to consist of not less than the following number of Lectures, viz.

One hundred on Chemistry.

One hundred of Materia Medica and Therapeutics.

One hundred on the Principles and Practice of Medicine.

Sixty on Midwifery, and the Diseases of Women and Children.

Fifty on Forensic Medicine.

Fifty on Botany.

The number of Lectures on Anatomy and Physiology, and of Anatomical Demonstrations, must be in conformity with the regulations of the Royal College of Surgeons of London, on these subjects.

The Lectures required in each course respectively, must be given on separate days.

* As evidence of age, a copy of the baptismal register will be required in every case where it can possibly be procured.

† A testimonial of moral character from the gentleman to whom the Candidate has been an apprentice, will always be more satisfactory than from any other person.

Students, when they present themselves for examination, must bring testimonials of having received instruction in Practical Chemistry during their attendance upon the Lectures on Chemistry, Materia Medica, or Forensic Medicine: and also of having attended a full course of Clinical Lectures, and such instruction in Morbid Anatomy, as may be afforded them during their attendance at an Hospital.

Every Student will be required to produce proof of having dissected the whole of the body once at least.

STUDENTS WHOSE ATTENDANCE ON LECTURES COMMENCED PRIOR TO THE 1st OF FEBRUARY, 1828, WILL BE ADMITTED TO EXAMINATION IN CONFORMITY WITH THE REGULATIONS PUBLISHED IN SEPTEMBER, 1826, *VIZ.* AFTER AN ATTENDANCE ON

One Course of Lectures on Chemistry:

One Course of Lectures on Materia Medica:

Two Courses of Lectures on Anatomy and Physiology:

Two Courses of Lectures on the Theory and Practice of Medicine:

And six months' Physicians' Practice at an Hospital, or nine months at a Dispensary.

THOSE WHO BEGAN TO ATTEND LECTURES SUBSEQUENTLY TO THE 1st OF FEBRUARY, 1828, AND PREVIOUSLY TO THE 1st OF OCTOBER OF THE SAME YEAR, IN CONFORMITY WITH THE REGULATIONS OF SEPTEMBER, 1827, *VIZ.* AFTER AN ATTENDANCE ON

One Course of Lectures on Chemistry:

One Course of Lectures on Materia Medica and Botany:

Two Courses of Lectures on Anatomy and Physiology:

Two Courses of Lectures on the Theory and Practice of Medicine: these last having been attended subsequently to the Lectures on Chemistry and Materia Medica, and to one Course at least of Anatomy:

And six months, at least, Physician's Practice at an Hospital, or nine months at a Dispensary; such Attendance having commenced subsequently to the termination of the first Course of Lectures on the Principles and Practice of Medicine.

THOSE WHOSE ATTENDANCE ON LECTURES COMMENCED IN OCTOBER, 1828, MUST HAVE COMPLIED WITH THE REGULATIONS OF SEPTEMBER, 1828, *VIZ.* BY HAVING ATTENDED

Two Courses of Lectures on Chemistry:

Two Courses of Lectures on Materia Medica and Botany:

Two Courses of Lectures on Anatomy and Physiology:

Two Courses of Anatomical Demonstrations:

Two Courses of Lectures on the Theory and Practice of Medicine; these last having been attended subsequently to one Course of Lectures on Chemistry, Materia Medica, and Anatomy.

And six months, at least, the Physician's Practice at an Hospital (containing not less than sixty beds,) or nine months at a Dispensary: such attendance to have commenced subsequently to the termination of the first course of Lectures on the Principles and Practice of Medicine.

ALL STUDENTS WHO BEGAN TO ATTEND LECTURES IN JANUARY, 1829, ARE REQUIRED TO HAVE ATTENDED THE PHYSICIAN'S PRACTICE AT AN HOSPITAL FOR NINE MONTHS, OR AT A DISPENSARY FOR TWELVE MONTHS, AND ALSO TO HAVE ATTENDED

Two Courses of Lectures on Midwifery, and the Diseases of Women and Children.

STUDENTS WHOSE ATTENDANCE ON LECTURES COMMENCED ON OR AFTER JANUARY, 1831, MUST ADDUCE PROOF OF HAVING DEVOTED AT LEAST TWO YEARS TO AN ATTENDANCE ON LECTURES AND HOSPITAL PRACTICE; AND OF HAVING ATTENDED THE FOLLOWING COURSES OF LECTURES:

<i>Chemistry:</i>	{	Two Courses—Each course consisting of not less than Forty-five Lectures.
<i>Materia Medica and Therapeutics:</i>	{	Two Courses—Each Course consisting of not less than Forty-five Lectures.

ANATOMY and PHYSIOLOGY: ANATOMICAL DEMONSTRATIONS.	} Two Courses: } } Two Courses: }	Of the same extent as required by the Royal College of Surgeons of London.

PRINCIPLES and PRACTICE of MEDICINE:	} Two Courses—Each Course consisting of not less than Forty-five Lectures,—To be attended subsequently to the termination of the first Course of Lectures on Chemistry, Materia Medica, and Anatomy and Physiology.

BOTANY:	} One Course—consisting of not less than Thirty Lectures,—to be attended between the 1st of April and 31st of October,

MIDWIFERY: and the DISEASES of WOMEN AND CHILDREN:	} Two Courses.

FORENSIC MEDICINE: One Course—to be attended during the second year.

Students are likewise earnestly recommended to avail themselves of instruction in *Morbid Anatomy*.

The Candidate must also have attended, for *Twelve Months* at least, the Physician's Practice at an Hospital containing not less than Sixty Beds, and where a Course of Clinical Lectures is given; or for *Fifteen Months* at an Hospital where Clinical Lectures are not given; or for *Fifteen Months* at a Dispensary connected with some Medical School recognized by the Court. No part of this attendance can be entered upon until the termination of one entire year from the commencement of attendance on Lectures, nor until one course of Lectures, at least, on Chemistry, Materia Medica, Anatomy, and the Practice of Medicine, have been attended in the order prescribed by the Regulations.

The Testimonials of attendance on Lectures, and Medical Practice, must be given on a printed form, with which Students will be supplied, on application, at the under-mentioned places:

In LONDON, at the Beadle's Office, at this Hall.

In EDINBURGH, at Messrs. MacLachlan and Stewart's, booksellers.

In DUBLIN, at Messrs. Hodges and Smith's, booksellers.

In the provincial towns, where there are Medical Schools, from the Gentlemen who keep the Registers of the Schools.

No other form of Testimonial will be received; and no attendance on Lectures will qualify a Candidate for examination, unless the Lecturer is recognised by the Court.

The names of the Lecturers recognised by the Court, may be seen on application to the several Gentlemen acting as Registrars in the Provincial Schools, and at the Beadle's Office at the Hall.

The Teachers in London, Dublin, Edinburgh, Glasgow, and Aberdeen, recognised by the constituted Medical Authorities in those places respectively, are recognised by the Court; and Certificates given by the Medical Professors in the Continental Universities are also recognised and received by the Court.

Gentlemen wishing to be recognised as Lecturers, are referred to the following Resolutions of the Court, passed on the 18th of November, 1830, viz.

RESOLVED,

That no Member of the Court of Examiners shall be recognised as a Lecturer on any branch of Medical Science.

That the Court will not recognise any Teacher who may give Lectures on more than two branches of Medical Science.

That the Court will not recognise a Teacher until he has given a Public Course of Lectures on the subject he purposes to teach; but if, after such preliminary Course of Lectures, the Teacher should be recognised, the Student's Certificate of Attendance on that Course will be received.

That the Court will not recognise a Teacher until he has produced very satisfactory testimonials of his attainments in the science he purposes to teach, and also of his ability as a Teacher thereof, from persons of acknowledged talents and of distinguished acquirements in the particular branch of science in question.

That satisfactory assurance shall also be given that the Teacher is in possession of the means requisite for the full illustration of his Lectures, viz. that he has, if lecturing—

On *Chemistry*, a Laboratory and competent Apparatus :

On *Materia Medica*, a Museum sufficiently extensive :

On *Anatomy and Physiology*, a Museum sufficiently well furnished with Preparations, and the means of procuring recent Subjects for Demonstration :

On *Botany*, a Hortus Siccus, Plates or Drawings, and the means of procuring fresh Specimens :

On *Midwifery*, a Museum, and such an Appointment in a Public Midwifery Institution as may enable him to give his Pupils practical Instructions.

That the Lecturer on the *Principles and Practice of Medicine* must be, if he lectures in London, or within seven miles thereof, a Fellow, Candidate, or Licentiate of the Royal College of Physicians of London ; and if he lectures beyond seven miles from London, and should not be thus qualified, he must be a graduated Doctor of Medicine of a British University of four years' standing (unless previously to his graduation he has been for four years a Licentiate of this Court.)

That the Lecturer on *Materia Medica and Therapeutics* must be a Fellow, Candidate, or Licentiate of the Royal College of Physicians of London ; a graduated Doctor of Medicine of a British University of four years' standing (unless previously to his graduation he had been for the same length of time a Licentiate of this Court) ; or he must be a Licentiate of this Court of four years' standing.

That the Lecturer on *Anatomy and Physiology* must either be recognised by the Royal College of Surgeons of London, or must be a Member of that College of four years' standing.

That the *Demonstrator of Anatomy* must either be recognized by the Royal College of Surgeons of London, or must be a Member of that College.

HOSPITALS AS SCHOOLS OF PRACTICAL MEDICINE.

No Hospital (not already recognised) will in future be placed upon the list of recognised schools of Practical Medicine, unless it is situated in London, or in one of the provincial cities or towns in which Schools of Medicine are established, and the Physicians attached to it give a full course of instruction in Clinical Medicine and Morbid Anatomy.

The Hospital must contain one hundred patients at least, and must be under the care of at least two Physicians, each of whom must be a Fellow, Candidate, or Licentiate of the Royal College of Physicians of London, if the Hospital be situated in London ; and if in a provincial town, the Physicians, if not members of the Royal College of Physicians, must be Graduated Doctors of Medicine of a British University.

The Apothecary of the Hospital must be *legally* qualified, either by having been in practice prior to or on the 1st of August, 1815, or by having received a Certificate of Qualification from the Court of Examiners.

DISPENSARIES AS SCHOOLS OF PRACTICAL MEDICINE.

The Court will recognise, as Schools of Practical Medicine, such Dispensaries as shall give satisfactory evidence on the following points, viz.

That the Dispensary is situated in some city or town in which there is a Medical School recognised by the Court :

That the rules for the government of the Dispensary permit the attendance of Students, and that the Physicians afford them instruction and opportunities of acquiring practical knowledge in Medicine,

That the Dispensary (if within the limits of the jurisdiction of the Royal College of Physicians of London) is under the medical care of at least two Physicians, each of whom is a Fellow, Candidate, or Licentiate of the Royal College ; and if beyond these limits, that it is under the care of at least two Physicians, who, if not so qualified, are graduated Doctors of Medicine of a British University, of four years' standing :

And that the Apothecary of the Dispensary is *legally* qualified, either by having been in practice prior to or on the 1st of August, 1815, or by having received a Certificate of Qualification from the Court of Examiners.

REGISTRATION.

A book is kept at the Hall of the Society for the Registration, at stated times, of the names of Students, and of the Lectures, Hospitals, or Dispensaries they attend.

All Students, in London, are required to appear personally, and to register the several classes for which they have taken Tickets ; and those only will be considered to have complied with the regulations of the Court, whose names and classes in the register correspond with the testimonials of the Teachers.

The book will be open for the registration of Tickets, authorising the attendance of Students on Lectures and Medical practice, during the *first twenty-one days* of October, and *first fourteen days of May*, from Nine o'clock until Two ; and for the registration of Certificates of having *duly attended* such Lectures or Medical Practice during the *last fourteen days* of April and of July.

The Court also require Students at the Provincial Medical Schools to register their names in their own hand-writing, in the order above stated, with the Registrar of each respective school ; and the Registrars are requested to furnish the Court of Examiners with a copy of each registration *immediately* after its termination, as those Students only will be admitted to an examination whose registrations have been *duly* communicated to the Court.

NAMES OF GENTLEMEN HAVING THE CARE OF THE REGISTERS.

BATH . . .	{	R. T. Gower, Esq.	Lecturer on Anatomy.
		John Spender, Esq.	Ditto.
BIRMINGHAM,		W. Sands Cox, Esq.	Ditto.
BRISTOL . . .	{	Dr. Wallis	Ditto.
		Henry Clark, Esq.	Ditto.
HULL	{	Edward Wallis, Esq.	Ditto.
		Robert Craven, Esq.	Ditto.
LEEDS		Thomas Pridgen Teale, Esq.	Ditto.
LIVERPOOL . .		William Gill, Esq.	Ditto.
MANCHESTER,	{	Joseph Jordon, Esq.	Ditto.
		Thomas Turner, Esq.	Ditto.
		Thomas Fawdington, Esq.	Ditto.
SHEFFIELD . .	{	Wilson Overend, Esq.	Ditto.
		W. Jackson, Esq.	Ditto.

Each Student at his first registration will receive the printed form on which he is to obtain the certificates of his Teachers.

EXAMINATION.

Every person offering himself for examination must give notice in writing to the Clerk of the Society on or before the Monday previously to the day of Examination, and must

also at the same time deposit all the required Testimonials at the Office of the Beadle, where attendance is given every day, except Sunday, from *Nine* until *Two* o'clock.

The examination of the Candidate for a certificate of qualification to practice as an Apothecary, will be as follows:

In translating parts of Celsus de Medicinâ, and Gregory's *Conspectus Medicinæ Theoreticæ* ;*

In Physician's Prescriptions, and the *Pharmacopœia Londinensis* :

In Chemistry :

In *Materia Medica* and Therapeutics :

In Botany :

In Anatomy and Physiology :

In the Principles and Practice of Medicine.†

The examination of a Candidate for a certificate of qualification to act as an Assistant to an Apothecary, in compounding and dispensing medicines, will be as follows :

In translating Physician's Prescriptions, and parts of the *Pharmacopœia Londinensis* :

In Pharmacy and *Materia Medica*.

By the 22d section of the act of Parliament, no rejected Candidate for a Certificate to practice as an Apothecary, can be re-examined until the expiration of six months from his former examination ; and no rejected Candidate as an Assistant until the expiration of three months.

The Court meet in the Hall *every Thursday*, where Candidates are required to attend at A QUARTER BEFORE FOUR O'CLOCK.

The act directs the following sums to be paid for certificates :

For London, and within ten miles thereof, Ten Guineas.

For all other parts of England and Wales, Six Guineas.

Persons having paid the latter sum become entitled to Practice in London, and within ten miles thereof, by paying Four Guineas in addition.

For an Assistant's Certificate, Two Guineas.

BY ORDER OF THE COURT,

JOHN WATSON,
SECRETARY.

APOTHECARIES' HALL,
April 23d, 1835.

For information relative to these Regulations, Students are referred to Mr. WATSON, who may be seen at his Residence, 43, Berners-street, between the hours of Nine and Ten o'Clock every morning (Sunday excepted) ; and for information on all other subjects connected with the " ACT FOR BETTER REGULATING THE PRACTICE OF APOTHECARIES," application is to be made to Mr. R. B. UPTON, Clerk of the Society, who attends at the Hall every Day (Sunday excepted,) from One to Three o'Clock.

It is expressly ordered by the Court of Examiners, that no gratuity be received by any Officer of the Court.

* Students may undergo their Latin examination in these works at the commencement of their studies in London, by giving notice to the Beadle, at their first registration, of their wish to do so. And students who are already registered will be admitted to this examination on making an application to the Court.

† This branch of the examination embraces an inquiry into the diseases of pregnant and puerperal women ; and also into the diseases of children.

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OF THE

MEDICO-CHIRURGICAL REVIEW,

No. XLVI. OCTOBER 1, 1835.

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Recently published by Mr. Highley, 32, Fleet Street, price 10s. 6d. (five shillings to Subscribers) a highly finished Engraving by Phillips, from a painting by J. Wood, of Dr. JAMES JOHNSON, Editor of the Medico-Chirurgical Review.

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GENERAL INDEX TO THE MEDICO-CHIRURGICAL REVIEW.

This highly useful volume, price 3s. 6d., has been printed at a great expense, and Subscribers are requested to order copies early, as only a thousand copies are struck off, and they are getting low.*

His Majesty's Ship, TYNE, Gibraltar, 6th June, 1835.

SIR,—The Case of Mr. Sprague, advertised in the last Number of your Review, having appeared to me, to call loudly for pecuniary support from the benevolent of all classes, but especially from his professional brethren, I have much pleasure in contributing my mite towards his relief. It is also with much gratification that I likewise add, that after submitting the case to the consideration of my messmates, they very cheerfully subscribed as follows:

Mr. Wellesley, one dollar.	A young Gentleman, two dollars.
Mr. Murray, one dollar.	Mr. Compton, one dollar.
A young Gentleman, one dollar.	Mr. Kingston.
Mr. Wilcox, five shillings.	Mr. Law, five shillings.
Mr. Jenkins, one dollar.	Mr. Coote, one dollar.
Mr. King, five shillings.	Mr. Malme, one dollar.
Mr. Clendon, one dollar.	Mr. Parrish, one dollar.
Mr. M'Naghton, one dollar.	Mr. Symms, one dollar.
Mr. Henry, one dollar, in addition to my guinea previously transmitted.	

Total amount of subscriptions from the Midshipmen's Berth of His Majesty's Ship Tyne, **Five Guineas.**

I am, Sir, Yours truly, J. PLIMSOLE,
Assistant Surgeon, H. M. S. Tyne.

* N.B.—The American Republishers did not receive a sufficient number of subscriptions for the Index, to warrant putting it to press. They ordered copies from the Editor, however, for such as had subscribed, which have not yet arrived. As soon as they are received they will be sent to their subscribers.

THE Medico-Chirurgical Review,

No. XLVI.

[NO. 6 OF A DECENNIAL SERIES.]

JULY 1, TO OCTOBER 1, 1835.

A FURTHER INQUIRY CONCERNING CONSTITUTIONAL IRRITATION, AND THE PATHOLOGY OF THE NERVOUS SYSTEM. By *Benjamin Travers*, F.R.S. Senior Surgeon to St. Thomas's Hospital, &c. &c. Octavo, pp. 444. Longman's, London, 1835.

OUR readers may remember that, in the year 1827, Mr. Travers published the first part of a work, entitled, "An Inquiry concerning that Disturbed State of the Vital Functions usually denominated Constitutional Irritation." The interval between the appearance of that and of the present Part has been considerable, but Mr. Travers does not deem it necessary to vindicate himself from the imputation of having pursued an idle speculation, because he has no novelties to submit to the notice of the public. His object may be gleaned from the following brief apology.

"I request of my reader to bear in mind that it professes to be only an 'Inquiry,' seeking and supplying illustration from facts, and reasonings thereupon, not aspiring to guide his views so much as to unfold my own, and thus to indicate the direction in which, as it appears to me, his also may be usefully applied. For the rest, I bespeak his patience and his candour;—the first, that he may duly appreciate the extent and importance of the subject; the second, that he may judge of the manner in which it is treated with forbearance, and lenity to its admitted defects.—'Res enim ardua vetustis novitatem dare, novis auctoritatem, obscuris lucem, dubiis fidem; omnibus Naturam, et Naturæ sua omnia.'—*Preface*, viii.

The work before us consists of two divisions, The first is devoted to the consideration of Irritation of various kinds—the second to the Nervous System and its Pathology.

The first contains six chapters. The two first are occupied with the subject of "reflected irritation." In the third we are informed of the connexion between direct and reflected irritation. In the fourth we are made acquainted with the local changes of structure not essentially inflammatory, and of local inflammations supervening on or connected with constitutional diseases. In the fifth, we are presented with constitutional inflammations as examples of reflected irritation. And, finally, the sixth is a supplement to the preceding five.

To this first division we shall now proceed, and endeavour to exhibit a connected view of the facts and the opinions of our author. In this attempt we perceive and must admit the existence of a difficulty. Our author's ideas are profound, and his language is at times obscure. The subject, Irritation,

is one more talked about than understood, or indeed intelligible, and though we must in practice admit its existence, in reasoning we are scarcely able to explain its nature. This reflection may account for what might otherwise appear confused in the language or the thoughts of Mr. Travers. What remarks we have to make will chiefly spring from a consideration of individual facts or opinions. We shall therefore advance, without more delay, to an analytical examination of the work.

The first chapter opens with a recapitulation of the principal objects of the former volume. His principal aim was to exhibit the occurrence, the phenomena, and the results of that state termed by surgeons Constitutional Irritation.

"I drew," he observes, "a distinction between irritation and inflammation in a local sense, and irritation and fever in a general sense; shewing at the same time, that though the combination in both senses was frequent, it was far from invariable; and that, upon the whole, the most formidable, because the least controllable forms of constitutional irritation existed in the absence of inflammation and fever.

The nervous system I shewed to be the source of these morbid actions, and pointed out the direct agency of some causes of excitement, and the indirect agency of others, and thence established the distinction between direct and reflected irritation. It was my object, in the former work, to delineate the direct, and in the present I shall consider the reflected irritation. It is essential to premise, that I confine my view to such diseases as have sooner or later external and local demonstration, and are therefore strictly in the province of surgery; although such demonstration may be trivial in appearance, or in point of time separated by a considerable interval from the constitutional disturbance, whether anterior or subsequent to it. To recapitulate.—

"Constitutional irritation I consider to be of two kinds, direct and reflected, by which arbitrary distinction I mean to imply, that the first is wholly and immediately derived from the part, commences and is identified with the local mischief, and the constitution has no share in its production. The second, on the contrary, originates in a peculiar morbid state of the constitution, to which the injury or inflammation has given birth, or it may be, previously existing. The first is truly symptomatic: never originating spontaneously, and being immediately induced by the local irritation, is capable of being essentially mitigated or arrested by its removal. The second is occasionally idiopathic, and being as often the cause as the effect of the local action, is less influenced by local treatment. In the first, the local changes are depending on local causes, in the second they depend on constitutional causes. Cases are of no uncommon occurrence, in which after an interval the reflected supervenes upon the direct irritation, or the direct is superadded to the reflected, already established, which may therefore be regarded as examples of mixed irritation, the part and the constitution acting and reacting alternately upon each other." 3.

With this recapitulation, which constitutes a sort of formal introduction to the reader, and must establish an acquaintance between him and the author, we feel ourselves at home with both, and may proceed, without restraint, to facilitate their mutual intercourse.

Mr. Travers occupies the remainder of this chapter with a sketch of the influence of constitution and habits upon local disease. The sketch is a just one, more just indeed than novel, and requires no particular notice at our hands. The experience of mankind has always recognized and must ever own the operation of both these agencies. The conclusions of our author

may be briefly summed up. If called upon to mention the most powerful predisponents to disease, he would say, of the time of life, youth or age; of temperaments, the scrofulous; of habits of life, those of poverty in the aggregate; of moral causes, anxiety and the depressing passions; of external and adventitious circumstances, the abuse of liquor, the operation of cold, and the action of mercury. To these conclusions we see no objection, indeed we suppose they would be generally admitted, and are generally believed.

The subjects of the second chapter are—Illustrations of Reflected Irritation—Pre-existing Organic Disease—Metastasis—Diseased Actions set up in other parts by Injuries and Inflammations—and Cases illustrative of all.

1. *Pre-existing Organic Disease.* The gist of Mr. Travers' remarks upon this head may be said to be, that organic changes silently creep on, and that few attain lengthened age without them, whilst few also die from disease or accident after the middle period of life, in whom dissection does not disclose some palpable evidences of organic change not previously known, or at best only vaguely surmised to exist.

We are inclined to think that Mr. Travers attaches much importance to the more minute alterations of structure, that occur as life advances—and that he leans to the opinion that the result of operations is greatly influenced by what would seem to be slight organic changes. We suppose, there are few persons who would broadly deny the general position, that the slightest departure from a perfectly sound state of any organ, must constitute pro tanto a departure from good health, and constitutional vigour. Yet the application of this rule is difficult, and many disturbing circumstances conspire to diminish its usefulness as a practical standard of truth. Mr. Travers presents some cases, calculated to support his opinions upon this point. He has notes of others in which small operations have proved fatal in a week or ten days, in a manner quite inexplicable but upon the presumption of a pre-existing morbid diathesis, or an actual morbid change; when the friends of the parties, in their vexation at so unexpected a result, have immediately removed the body, and obstinately refused inspection. A morbid condition of the lungs or liver, and effusion into the chest or upon the brain, have generally been indicated in such instances. Yet he candidly adds that, in other cases where examination has been obtained, no actual change has been detected beyond a gorged condition of the blood-vessels of these organs, partial depositions from their extremities, opacities, and old adhesions of the lining membranes, extreme flaccidity of the muscular fibre, &c. It must be owned that in many instances patients die after injuries and operations, when no previous organic changes can be found to help the pathologist out of his difficulties, or assist him in his conjectures. It is well when science makes all clear, and when it fails, as it often does, to tell us precisely the why and wherefore, it induces us to search more deeply, and to strive more manfully to observe, to compare, and to discover.

Amongst other cases, Mr. Travers cites the following.

Case. A stout brew-house porter, æt. 54, had the fluid of a hydrocele drawn off by a lancet-puncture on the 1st of April, 1834. On the 8th, he felt chilly and feverish, and a slight erythematous blush was observed over

the now again tense scrotum and groin of the same side. The scrotum was freely incised, and an abscess discharged. The cellular membrane was in a state of slough. On the 18th the skin had become yellow; on the 21st, he was attacked with purging; on the 22d, he had a rigor, and the wound was in a state of gangrene; on the 24th, he died. This man had almost lived on porter.

On examination, the tunica vaginalis was sloughy, but the affection of the groin was confined to the skin; the testis and chord sound, and a small hydrocele of the latter. There was a gorged condition of all the viscera. The liver was brittle and granulated. Some chronic adhesions were found in the chest.

Such cases as these are common in the London hospitals. A man who has been accustomed to drink large quantities of gin or porter, and to eat perhaps much animal food, receives a compound fracture. He is placed in bed, put suddenly on low diet, and deprived of the stimulants he has been accustomed to. Such a man gets delirium tremens, or low diffuse inflammation of the cellular texture of the limb. He dies, and on dissection, the liver is found to present what is called the "nutmeg" appearance, or perhaps no obvious visceral alteration can be found. Mr. Travers selecting the condition of the liver, or, it may be, some old adhesions in the chest, or a few scattered tubercles in the lung, as evidence of pre-existing organic disease, sees in this sufficient cause why the patient dies, from a slight injury or a trivial operation.

Yet we doubt if his opinion is that of the generality of surgeons. They are rather disposed to look upon the patient as one who has been used to an unnatural stimulus, and who cannot support the sudden and continued abstraction of it. They watch with anxiety for the symptoms that denote the advent of low fever, and they cautiously refrain from keeping the individual too long on a debilitating regimen. We recollect the period, it is not many years ago, when traumatic delirium, and diffuse inflammation of the cellular tissue, and the low forms of erysipelas were much more frequent after injuries and operations in a large London hospital than they are at present. Then attention had scarcely been directed to the necessity of stimulating patients who had habitually been stimulated. Now such accidents are much less common, because the depletion of persons of this description is carefully avoided. Yet probably as many "nutmeg livers" are produced by gin as formerly, and perhaps it may be found that an equal quantity of "pre-existing organic disease," is not attended with a corresponding quantum of mortality.

For our own parts, we will not attempt to maintain or to controvert the position, that a triviable amount of cognizable organic alteration is sufficient to account for the fatal results, occasionally, and but occasionally, noticed after operations usually unimportant. The discovery of these changes may seem to offer a satisfactory explanation of the circumstances, but unfortunately we are met with the obvious difficulty, that changes much greater seem to be productive of no serious consequences.

We think we may leave this question to those who consider themselves capable of sifting or of solving it, and may pass to the second "Illustration of reflected Irritation," offered by our author.

2. *Metastasis.* Mr. Travers seems to think that the principle of metastasis is, in effect, the same as that of sympathy. This may be thought an attempt to illustrate the obscurum by the obscurius, and we conceive that an example or two of the fact is, in the present condition of our knowledge, worth, perhaps, more than a volume of discussions.

"Of several instances in which I have witnessed the fatal operation of this principle, I should mention as among the most marked, serous apoplexy from retention of urine and the sudden reduction of swollen testes; palsy of the retina from the sudden retrocession of a skin rash, from a tumor obstructing the bowels, the irritation of worms, engorgement of the liver, and suppressed catamenia; and erythema, erysipelas, and even diffused gangrenous inflammation from the healing of wounds upon distant parts. But the case most strongly impressed upon my mind happened many years ago, in which I encouraged one of my dressers to a trial of skill in accomplishing the healing of a very extensive and ancient ulcer of the leg, within a given time. Almost immediately upon its complete cicatrization, a diffused swelling arose in the pectoral region of the same side, the parietes took on extensive gangrenous inflammation, and the patient died in less than a week." 20.

Mr. Travers relates four cases. They resemble each other so very closely that one is a specimen of all. Whether that will be thought a fair example of metastasis is another thing.

Case. A sailor, lately returned from the West Indies, of sallow complexion, but by his own report, good health, with regular bowels, unimpaired appetite, clean tongue, and steady pulse, had a large deep sloughy ulcer on the outer side of the right foot, and another on the left leg; they were of two months' standing, and had been much neglected on ship-board.—Bark, and a small allowance of wine and porter. A stale beer poultice to each sore. On 8th of August, 1818, the sloughs had disappeared from the sores, and healthy granulations had sprung up. On the 15th, there was some enlargement of the abdomen. On the 12th of September, the sores were nearly healed, and ten quarts of limpid fluid were drawn off by tapping the abdomen. The fluid re-accumulated, and, on the 15th of October was again drawn off. The sores were healed. For the third time the abdomen filled, and, on the 20th of November, the patient died.

For our own parts, we must own that the evidence in favour of metastasis is rather weak. The patient, just returned from the West Indies, was in a state which rendered dropsy very likely to ensue. That he did get ascites, when ulcers that existed on the leg were improving, is certainly not conclusive of the occurrence of metastasis. Yet this case is quite as satisfactory as the rest. We would not wish to be misunderstood. We do not question the occurrence of metastasis. We have seen it more than once, and its reality is, we think, as completely established as that of any principle of action in the animal economy. But Mr. Travers' instances are unfortunate; a critic might reasonably object to them.

The third illustration of reflected irritation is—

3. *Diseased Actions set up in other Parts, by Injuries and Operations.*

"In the works of various authors and collectors of cases, will be found examples of the post-mortem discovery of a morbid state of other and distant parts

of the body, bearing every character of recent formation, and of the existence of which, prior to the injury in one case, and the external disease in another, there was neither sign nor ground for conjecture. These have sometimes been of a directly fatal character, as acute inflammation and effusion into the cavities. Sometimes, and more frequently, they have been of a chronic kind, opposing insurmountable obstacles to recovery by change of structure in vital organs, as tubercles in the lungs, liver, &c.; in other cases, they have operated by their diffusedness rather than their nature to oppress the powers of life, and thus aggravate the malady, as extensive inflammatory actions upon the skin and cellular membrane. Lastly, internal organs have assumed a character of disease in a more advanced stage, or a more important position, similar to the first or external malady, whether scrofulous, or belonging to the morbid poisons, as the scirrhus and medullary cancer, lues, &c." 23.

Mr. Travers next refers, and rather fully, to the paper of the late Mr. Rose, on the subject of secondary inflammations after injuries and operations. To this subject, we have probably directed quite as much attention as our author, and our readers have been made acquainted with the facts and opinions of later inquirers—Arnott, Velpeau, and others. In the midst of this notice of Mr. Rose's paper, Mr. Travers introduces the following case.

Case. "A young lady, whose illness occupied a period of two years, was treated with great attention by several of the most eminent of the profession, in the departments of physic, surgery, and midwifery. Opinions were divided on the point, whether the brain was affected in its organization, or only in its function; the symptoms being, circumscribed fixed pain over the left limb of the lambdoid suture increased by pressure; pain in the extremities, and great loss of muscular power, nearly amounting to hemiplegia of the same side. Signs of great depression of the whole nervous system were alarmingly indicated, and the disturbance of the external senses and mental faculties was such, as accompanied with obstinate obstruction and continued wasting, left no one in doubt as to the seat and result of the malady; although an uneasiness approaching to pain at the lower margin of the chest on the same side and dyspnoea, supposed spasmodic, called for the occasional application of three or four leeches, which gave temporary relief to these symptoms. The prostration and distress from motion of any kind were excessive. Was it organic disease of the brain, or aggravated hysteria?"

Examination. The brain and its membranes, and all the viscera were healthy, with the exception of the lungs, which were filled with tubercles in various states of progress. No apprehension of this fact had been entertained through the whole progress of the malady, so completely had the metaphysical or functional masked the physical or organic condition." 25.

What this case has to do with the occurrence of secondary inflammations after operations and injuries, we profess ourselves quite unable to conceive. The above was an instance of tubercular phthisis, undiscovered during life, and it seems to us to have been little else. In fact, Mr. Travers seems to mix up many various actions and affections, and to view them, we think without advantage, under one general heading. However that may be, he divides these secondary actions into contiguous and remote. The continuous sympathy of parts is illustrated by ordinary examples, being a direct oftener than a reflected irritation. The affection commonly called erysipelas, in which the cellular membrane of the entire arm becomes progressively the seat of inflammation, from an injury to the tip of the finger,

presents the most apposite and familiar instance. He offers, also, instances of contiguous inflammatory action. Take one. A deeply situated steatomatous tumour was extirpated from the axilla. The man died on the eighth day from acute pleurisy of the same side. No suspicion was entertained of the inflammation of the thorax, although the right lung was covered with patches of recent lymph, and a copious effusion had taken place in the cavity. In reference to this case, we think it most probable that the contiguity, or otherwise, of the pleura was really a matter of no consequence. Another person has the great toe amputated, and he, too, dies of recent pleurisy. Are the cases dissimilar? Only, it appears to us, in the accidental circumstance, that the great toe is farther from the chest than the axilla is. The affections are parallel, and divisions of name, and of name only, are, perhaps, of dubious advantage.

Mr. Travers relates several cases of remote "inflammatory action"—pericarditis, for instance, after a suppurating scalp-wound—peritonitis, after amputation of a leg for fungoid tumor—phthisis, after ulceration of the cartilages of the knee-joint, and so on. That all are instances of inflammatory action, supervening in an organ remote from that originally implicated, can neither be doubted nor disputed. Yet, although nosologically classed together, there are many and important differences between the secondary symptoms of syphilis, the secondary deposits after an operation or an injury, and the phthisis that follows a chronic articular disease. This instance serves, like others, to shew that works of this description are fit only for those, whose information and experience enable them to take general doctrines and speculative opinions, for no more than they are fairly worth.

We have now arrived at the third chapter, which is headed.

Of the Connexion between Direct and Reflected Irritation—their Reciprocity and Mixed Operation—the System re-acting on the Part, and the Part on the System.

The object of our author, in this chapter, is beset with no inconsiderable difficulties. Irritation, or, at least, the explanation of it, is not the most comprehensible of actions, and the mode of connexion between its forms, direct or reflected, may, perhaps, be more readily imagined than described. An author of talent, conversant with logical and metaphysical distinctions, frequently labours under the misfortune of addressing himself to readers, to whom metaphysics are equally unintelligible and uninteresting. Utilitarians in reasoning, as in fact, the immediate *cui bono* is their ready reply to an ingenious tissue of philosophic speculations. That class of readers will, we fear, feel some disappointment at the mode in which Mr. Travers treats of the connexion between the kinds of irritation we have mentioned. We shall endeavour to state his opinions clearly, though we fear we labour under the disadvantage of not exactly understanding them.

We are disposed to commence with a passage with which the chapter terminates. Its gist is an eulogium on the genius of Mr. Abernethy, and the value of induction. Yet we doubt if our author's view of induction does not trench a little on the realms of speculation, and we are not sure that the extension he accords to his, would submit to the more rigid trammels of the Baconian rules.

"The phenomena of reflected, *i. e.* reciprocal irritation, require to be more carefully studied than they have hitherto been by those who consider the profession of surgery a branch of science, and not a purely mechanical art. It is only of late years that the pathology of surgery has been cultivated, and for this we are mainly indebted to the genius of Mr. Abernethy, who possessed a mind of too philosophical a cast to be satisfied with the bare observation of facts, leaving their analysis and the relation between effects and their causes to more curious enquirers. There is a restlessness about a mind endowed with the power of investigation by induction, to trace the connexion between phenomena which are obvious to the senses, and those which, though less apparent, are not less real. The share which the constitution takes in diseases falling strictly within the province of the surgeon is so important, and exercises so vast an influence over the event, that I cannot but feel more surprised at the credit which our predecessors obtained, in neglect of such enquiries, than at the advances which the last twenty years have witnessed in the scientific improvement of surgery. A more perfect physiology is necessary, I admit, to explain much of what we see every day—but next to the consciousness of this deficiency, I believe that a habit of reflecting carefully upon morbid phenomena to the extent warranted by such data as we possess, will prove the strongest incentive, as well as the most efficient instrument, towards the improvement of physiology. The evils to be apprehended from applying the faculties of our minds to this object are first, an over-minuteness in our investigations, to the frittering away or oversight of master facts, or, on the other hand, a too rapid adoption of general principles and conclusions from insufficient particulars. The first is an error common to the humbler class of intellect, though not always that of least pretension—the latter is the rock upon which natural quicksightedness and ambitious enthusiasm, wanting the discipline of patient and laborious and truthful habits, so often make shipwreck of reputation." 63.

With this understanding of our author's general views, we may pass to his explanation of the connexion between direct and reflected irritation.

Sympathy, he says, comprises the whole mystery of irritation. This, it must be admitted, is driving out devils by Beelzebub, the prince of the devils. Were it put to the majority of surgeons, to pronounce which they understand most clearly—sympathy or irritation, we are inclined to think that the majority would be puzzled what answer to return. He proceeds to observe, that if an irritation, strictly local in its origin, produce a certain degree of reaction, the determination to the nerves and bloodvessels of the part presents a series of phenomena, constituting inflammation. If the action begins and terminates in the part, without occasioning the consciousness or the sympathy of the part, the inflammation may be denominated local; but if the action of the part be such as to excite the sympathy of the system, a fever follows. This fever, arguing the absence of "a torpid irresponsive, and unhealthy system," must be considered as serving a salutary purpose, the re-action being indispensable to the recovery of the part. This is, in fact, a version of the old maxim—the *vis medicatrix Naturæ*.

"When the injury, from its nature or its seat, is one of extraordinary severity, the constitution is affected to great febrile excitement or depression, as acute inflammatory or typhoid fever, but still presenting the type of fever. In extreme cases, however, as those of complicated injury, although neither involving vital organs nor the loss of blood, it loses that character altogether, and the system is permanently sunk beyond recovery, or is stunned and prostrated for a time, and recovers only to display new and anomalous modes of excitement. These, it will be remembered, are the two forms of direct irritation which I have for-

merly described—‘prostration without reaction,’ and ‘prostration with excessive reaction,’ as taking the place of fever in cases of grave local mischief, whether occasioned by violence or inflammation.” 43.

The ordinary case of reflected irritation, says our able author, is that in which the system operates upon the part, or upon any remote part prejudicially or in a manner destructive to its own safety. This is shewn in the super-vention of erysipelas after injuries—in the insidious inflammation of remote parts after the same—and in “the preternatural actions of the nervous system, as trismus and tetanus.” We feel it impossible to substitute any expressions of our own for the passage we are now about to quote. It is intended as an explanation of the supervention of direct upon reflected irritation.

“It will be obvious to reflection, that the direct irritation ensuing upon injury or inflammation, tends, if continued, to the production of the state of constitution above described; as when the injury, which acts as an exciting cause, though soothed, is unredressed, and the system is, by the aid of time and circumstance, restored to seeming tranquillity, though still oppressed by a sense of inequality to sustain the demands made upon it for support and repair. In this critical position it continually happens, that the constitution of the robust, which is unused to confinement, and of the weak, which is scarce adequate to maintain health, betrays a condition of morbid irritability which impedes the process of recovery, and lapses, sooner or later, into a wasting hectic, generally producing pulmonary or other visceral deposit. In those chronic changes of structure which arise independent of any assignable local cause, some of which we denominate constitutional diseases, as, for example, scrofula, scirrhus, &c., a similar passive morbid state of the system is gradually established, which, if aroused by any suddenly altered condition of the part, frequently assumes a degree of activity destructive to life. The irritation of a change, abstractedly beneficial, as for example, the removal of a tumor, or of a limb which we have vainly attempted to save, or the discharge of a large abscess, annihilates the benefit which, in different circumstances, it would have afforded. Had not the powers of the constitution been already overstretched, they would have rallied on the occasion, as they have often done from a state of almost hopeless depression; but the shock incidental to the change of condition oversets it, so exquisitely delicate has the balance become by gradual adjustment between the weight imposed and the sustaining force. If fatal results are exceptions to general experience, it is because experience has impressed caution: but they occur; and it has appeared to me that a more distinct solution of the question, why they occur, than has yet been given, may render them still less frequent.

This, then, is the case of the direct superadded to the reflected irritation; so that the reciprocity of the two is evinced in almost all protracted cases of surgery, and indeed their protraction is generally depending upon it. In a case which goes healthily forward without interruption, the constitution and the part preserve their adjustment so equally, that irritation can scarcely be said to exist; and this is the case when, after the first alarm and resistance of the nervous system is past, the circulation quiets down and lends all aid to the work of reparation. But when permanently unfavourable circumstances attend an injury or a disease, an ill-disposed habit or a cachexia is present, a previous organic change exists, or an interference takes place with the operations of nature, whether accidental, unavoidable, or ill-judged,—each of which causes comprehends a variety of conditions in detail,—the part and the constitution are alternate irritants, one of the other, and eventually co-operate for destruction.” 46.

We fear that the rigid reasoner might cavil with the *induction* of much

of the preceding passage. It is a plausible explanation of processes, more in the style of John Hunter than of that of severe modern pathology. It may be true, for example, that the system, while in a state of seeming tranquillity, is "still oppressed by a sense of inequality to sustain the demands made upon it for support and repair." This, we say, may be true; but our author would find it difficult to prove this metaphorical consciousness and volition on the system's part. To state, also, as Mr. Travers states, that the constitution of a robust individual, unused to confinement, "betrays a condition of morbid irritability which impedes the process of recovery, and lapses, sooner or later, into a wasting hectic, generally producing pulmonary or other visceral deposit, is, when analysed, to say very little that is satisfactory or clear. In short, not to be arguing points which no argument will ever settle, we see, in these explanations, but little really explained; and we say this without any disrespect to Mr. Travers, who has chosen a subject that the present state of our knowledge, both of physics and of metaphysics, is incapable of placing within the pale of perfect comprehension and of demonstration. For our own parts, we must confess that our notions of direct and reflected irritation remain any thing but definite or positive.

Mr. Travers brings forward several cases to exemplify the superaddition of the direct to the already established reflected irritation, as best illustrating the reciprocity of the two, and shewing how natural and unavoidable circumstances may set it up, how slight and otherwise harmless, if not directly beneficial, treatment may act destructively through this medium.

Case. A gentleman, whose health was much impaired by a long continuance of that species of cachexia, rather absurdly termed pseudo-syphilis, accidentally struck his shin. The blow was followed by indolent inflammation, and the formation of matter beneath the periosteum. The latter was divided, and the patient was necessarily confined to bed. From the time of his taking to his room, this gentleman discovered an alarming impatience of confinement, and could with difficulty be kept at home. Though naturally cheerful, he became desponding, owing to his frequent relapses of indisposition, and being a man of a delicate and honourable mind, was not consoled by reflections on the predisposing cause of his malady. The wound assumed a sluggish unhealthy character, its edges thickened, everted and painful, and a thin ichor flowing from it. The patient had neither rest nor appetite, and after three weeks' confinement to bed, a blush of inflammation appeared round the wound, and extended so rapidly, that in a day or two the entire limb, from the knee downward, was an œdematous, shapeless mass, fully twice the size of its fellow, and of a dusky red colour. While this change was taking place, the patient was seized with sudden delirium, so fierce as to require restraint, which was broken by intervals of the most obstinate and sullen silence, in which he appeared partially rational. After this state had endured three days and nights, he died exhausted.

In another case, a gentleman had extensive psoas abscess; this was opened by an incision, an inch and a half long, and a large quantity of curdly matter discharged. A poultice was applied to the wound. For two days all went well; but, on the night of the second day, the patient was attacked with nausea, vomiting, and rigor, and died in a state of collapse on

the fourth day. On examination, an immense quantity of matter was found in the sacs of the abscesses, but no appearance of inflammation was discovered in the viscera or in their cavities.

In the case of a young man who had a small subcutaneous tumor, composed of condensed cellular and fatty substance above the inner condyle of the humerus, a blister was applied, and this was followed by diffuse inflammation of the arm. Two large abscesses ensued, the patient became delirious, and died three weeks after the application of the blister. The patient had been very anxious on account of the absence of his relations. Mr. Travers explains the case thus. The irritable state of the habit determined the severity of the local action on the small excitement of a crown-sized blister, and I have no doubt that the excision of the tumor would have been equally fatal. We question whether the pure spirit of induction permits such confident prognostications on contingencies.

Other cases are related, but they prove, or seem to prove, no more than those we have already quoted. If they do not throw light on the connexion between direct and reflected irritation, and render our author's ideas on this mysterious subject clear; we doubt if a multitude would do much more, and we therefore take up the succeeding Chapter.

Of Local Changes of Structure not essentially Inflammatory. Of Local Inflammation supervening on Constitutional Diseases. Of Local Inflammation generating Constitutional Disease. Cachexia. Of Scrophula, Cancer, Syphilis, Cachectic Ulceration and Gangrene.

Such is the multifarious heading of the fourth chapter. To explain, or even to illustrate, the nature of these various and complex affections, is a task of no inconsiderable difficulty.

The first eight pages are occupied with the object of shewing that some changes are not essentially inflammatory—the hydrocele, for instance, or fatty tumor, or medullary tubercle, &c. So few, however, do look on these formations as the simple consequence of inflammation, that we need not play at nine-pins with the question. Mr. Travers, indeed, seems inclined to carry the view of the non-inflammatory origin of certain structural alterations, rather farther than many pathologists and surgeons. He observes, for instance, that—

“The thickening of the tunica vaginalis in chronic hydrocele, and the old irreducible hernial sac, is a process similar to the impaction and condensation of the cellular membrane in the formation of cysts; and the effusion of adhesive matter may doubtless take place under the stimulus of a slow but continued pressure in one instance, and the absorption of original structure in another, by a process quite distinct and often anticipatory of inflammation. What determines that pressure should in one case thicken and another attenuate, in one case promote the addition of a new, and in another the removal of an original texture, is the mode and degree of the local irritation applied, affecting either the nutrient or the absorbent action; this is the proximate cause; the remote cause is a final principle established in subservience to the economy, which may not improperly be termed a law.” 71.

In old hydrocele, the tunica vaginalis, is as Mr. Travers observes occasionally thickened. He thinks that the change may not be inflammatory, and possibly in some cases it may not. Yet we rather conceive that, in the majority of instances, an action not dissimilar to that of inflammation

will be found at the bottom of the alteration. Patients in whom this thickening exists occasionally complain of slight pain in the part, and in a thickened tunica vaginalis that we examined, there was evident arborescent injection on the surface. The capsules of certain organs, as that of the spleen, become thickened in the latter periods of life. Is this from inflammatory action? It is a difficult question to determine with precision, because it is difficult to determine what constitutes a slight degree of inflammation. If injection of the capillary vessels be considered adequate evidence of its existence, then inflammation must be granted to exist in the cases to which we are referring. But such inflammation is evidently different in kind, as in degree, from that which we commonly recognize as a powerful agent of organic change.

What determines, says Mr. Travers, that pressure should in one case thicken and in another attenuate, in one case promote the addition of a new, and in another the removal of an original texture, is the mode and degree of the local irritation applied, affecting either the nutrient or the absorbent action. A critical examination of explanations of this description, unfortunately shews, that they merely consist in substitution of a learned periphrasis for the simple expression of a fact. To say that pressure thickens a part, because the local irritation applied affects the nutrient action, is to say little more than that pressure thickens because it thickens. A real explanation would tell us *why* "the nutrient action" was affected in the one case, and the absorbent action in the other.

Our author treats in the next place of inflammation supervening on constitutional diseases. He observes, and the truth of the remark cannot be doubted, that in most cases of specific disease, as in scrofula, scirrhus, and so forth, inflammation is not an antecedent but a consequent. In fact, there are few cases of morbid alterations of structure, in which inflammation does not sooner or later come on. That inflammation is disposed to end in ulceration or in sloughing, for the vitality of morbid is not equal to that of natural structures. But though inflammation is obviously not the condition antecedent to these changes, local irritation, according to Mr. Travers, is. If such be the case, and probably it is so, we must acknowledge that in many instances all appreciable signs of such irritation are absent, and that many persons have some organ or part invaded by scirrhus, or medullary sarcoma, in whom no external symptom nor internal evidence was present to explain why it should be attacked.

"The symptoms which attend upon these chronic changes are a sensation of general malaise, languor, and lassitude, wandering pains, unequal distribution of blood and heat, uncertain rest and appetite, gradual decline of muscular tone and power, and perhaps of flesh, variable secretions, both as to quantity and kind, and an uncertain state of the temper and spirits. These are the signs of irritation from chronic change, and are indicative of the state of the system which has given origin to the morbid action, as much as of its effects. I call it, therefore, reflected irritation." 76.

Mr. Travers continues—

"The irritation of the constitution is barely perceptible in the early stage of the specific diseases. In scrofula, in all the varieties of cancer, in the numberless tumors and ulcers which have no obvious and direct local cause of origin, the constitution which has given birth to them being predisposed to their for-

mation, discovers little sympathy with them when formed. The seeming exceptions to this observation, are those set up by violence, or whose situation interferes with the structure and function of vital organs, as tubercles in the lungs, brain, stomach, or liver, for example.

Then the irritation becomes direct, and sets up fever which rapidly proves destructive; for reflected irritation, if left to run its course, is slow in comparison with the direct, which, though originating in some purely local cause, acts, as we have seen, with such intensity as to excite the instant sympathy of the brain and stomach, and thence of the universal nervous system.

In the case of specific disease, the local change marking the accession of inflammation, is attended by an alarming aggravation of constitutional symptoms, by reason of the reflected irritation previously existing, of which the external appearance was perhaps the first clear indication." 77.

Mr. Travers is of opinion, that though a morbid poison, produced in an individual by inoculation, will sooner or later shew itself in an external form, a man may, notwithstanding, die of scrofulous or venereal irritation and atrophy, without an external or local sign demonstrating its interference with the vital economy. Such a thing is possible, yet we conceive that the proof of it would not be easy. Scrofula and syphilis are terms implying the existence of certain evident phenomena. In scrofula, for instance, there is a deposit, which possessing certain characters, is known as scrofulous. If an individual dies, and no local change is found corresponding to that which we know from experience to be scrofulous, we imagine the Sorbonne would hesitate to admit that he died of scrofula. Here we see an instance of those metaphysical possibilities in which men of talent are prone to take delight, but which the sober scheme of inductive reasoning rejects.

Mr. Travers makes a remark, in the general justice of which we agree.

"I consider," he says, "inflammation specific, in being subordinate to the specific irritation, and when this is the case, it is of a chronic character, and circumscribed as in the scrofulous white swelling, in the scirrhous tumor of the mamma, in a genuine syphilitic ulcer of the glans penis. If the action is rapid and vehement, and threatening extensive disorganization, we may be sure it is the work of some other agent in combination, as to take the last example, a state of high inflammation from neglect, or venereal abuse during the existence of sores: confinement of matter, as in perfect phymoses; intemperance, or the previous employment of mercury in frequent irregular courses during untrained exposure to weather. The same remark applies to venereal ulcers of the throat and external skin, to eruptions, nodes, venereal ophthalmia—take away the susceptibility to inflammation from exposure and other incidental causes during the excitement of the system by mercury, and the severe local consequences referred to the action of syphilis would be no more seen." 81.

It would be well if practitioners were generally impressed with the truth of this observation. It ought to be engraved on the mind of every professional man, that much inflammatory action during the progress of syphilis, is not immediately dependent on the syphilitic poison, but on accidental circumstances—on cold, upon excess, on the evil influence or injudicious exhibition of mercury. This is contrary to the opinions of some recent authors, but practically we are convinced of its accuracy and truth.

We have seen constitutional disease giving rise to, and mixed up with local inflammation—we are now to regard local inflammation generating constitutional disease. Yet examples of this are so frequently, so con-

stantly presented to us, that few words are necessary to point it out. Perhaps, as Mr. Travers observes, the state of system occasionally induced by the venereal poison, is as marked and as melancholy an instance of the fact as any that could be readily selected.

The "cachexiæ" induced by scrofula, cancer, syphilis, and mercury, are reviewed in rapid order by our author. Yet we see nothing in his observations that demands particular notice upon our part, excepting, perhaps, his classification, which we give.

"SIMPLE CACHEXIÆ.

Suppuration.

Ulceration.

Gangrene.

ANIMAL POISONS.

{ Syphiloid.

{ Varioloid.

&c. &c.

SPECIFIC CACHEXIÆ.

Scrofula.

{ Scirrhus Cancer.

{ Lupus. Sweep's Cancer.

{ Medullary Cancer.

{ Hæmatoid. Melanoid.

MINERAL POISONS.

{ Mercurial.

{ Arsenical.

{ &c. &c." 90.

Mr. Travers relates eight cases of various kinds of cachexiæ. We shall select a few for the perusal of our readers.

CASE 1. *Cachectic Suppuration.* A gentleman, æt. 60, who had lived freely, had a sluggish boil at the root of the great toe. Having broken and discharged imperfectly, it was freely dilated in the direction of a hollow, which was sub-facial and of some extent. The exposed surface suppurated, and the suppuration extended slowly upwards to the knee. For some weeks before his death, he was in a state of low fever. The peculiarity of the case was, the continual recommencement of the suppurative action; for at the moment that the newly exposed surface was beginning to granulate, a new collection was forming higher in the limb, which became so painful as to make him anxious to have it laid open. This was done many times. The gangrenous inflammation invariably ensued upon the ulcerative, as the suppuration proceeded, so that ultimately all the parts affected were destroyed by gangrene.

Mr. Travers observes that he has seen several instances of this cachexia in the lower limbs; but fewer in the upper. Its distinguishing character is the uncontrollable tendency to a renewal of the suppurative action in the contiguous parts, and to a decay of the healing action in that which seems prepared for it.

CASE 2. *Cachectic Ulceration.* A man, æt. 44, who had been long accustomed to drink freely and to chew tobacco, was admitted into the hospital, March 22d, 1827. "About fourteen months since, during severe weather, the lower lip became chafed at the centre, and shortly afterwards he began to smoke a pipe. The lip then swelled and inflamed, and ulcers formed in various parts of it; to these he applied different ointments, and during the summer one or two healed, while in other parts of the lip, fresh ulcers formed. The lower lip is now of a dark red color, and somewhat swollen; towards the right side are two small jagged ulcers, near the margin, and penetrating completely through the substance of the lip into the

mouth; there is some surrounding thickening, and induration. He complains of occasional shooting pains, not very severe. His general appearance is that of health.—*Lot. argent. nitr. gr. v. ad aq. ʒj. R. Liq. arsenic. ℥. vj. Dec. cinch. ʒij. ter diē sumend.*

April 20th. The lip is much less swollen and indurated. The ulcers having gradually extended upwards and completely destroyed the fibres of the orbicularis oris, are now rapidly healing. Has not used tobacco in any form since his admission. To continue the remedies.

May 16th. Discharged quite well: scarcely any induration of the lip remaining.

In November following he returned with a fresh attack of the disease, which again yielded to similar treatment."

Mr. Travers remarks that a case closely resembling the preceding, in which the upper lip and angle of the mouth was the seat of disease, was admitted and healed under similar treatment. The subject of it was a drunkard and habitual smoker. He had a coated tongue and costive bowels, and required free purging with aloes, blue pill, and rhubarb, before commencing the mineral solution. This, after the action of the bowels is regulated, is, as Mr. T. informs us, almost a specific in such cases.

We have seen two or three instances of much chronic thickening of the lower lip near the angle, in persons accustomed to smoke excessively. The last instance that occurred to us was that of a gentleman, in whom the complaint had existed for some time. The thickening was such that the lip grasped between the finger and the thumb felt almost as thick as a large marble, the skin was red, a disposition to vesicular crust existed on it, and the part was the seat of lancinating pain. Blue pill every other night, succeeded by a saline aperient in the morning, and subsequently the alkaline infusion of sarsaparilla, effected a complete cure.

In a case of "scirrhus cachexia," scirrhus tubercles grew from the surface of the skull, from the dura mater, and in the liver; and the stomach was scirrhus throughout.

Mr. Travers relates a case of "syphiloid cachexia," which occupies thirteen pages of the work. The details are too lengthened for our purpose. An instance of mercurial cachexia is less prolix and more adapted for notice.

Case. Mary Pearce, æt. 34, a respectable married woman with a family, admitted June 5th, 1828, had been, for ten months, in a country dispensary. Her mouth and nose have been in a diseased state for a period of fifteen months. She has, upon repeated enquiry, invariably declared that she never had the venereal disease in any form; nevertheless she has been incessantly taking mercury; and her mouth and gums still bear testimony to the truth of this assertion.

A round excavated ulcer appears on the middle of the soft palate, and another of a similar description on the inner surface of her upper lip. Several small portions of bone have come away, whilst she was under the influence of mercury.

This patient was ordered quinine, and a lotion of the nitrate of silver. She pursued this plan for nearly a month, at the end of which time the ulceration had rather extended in the lip, and she suffered much from headache. A blister was applied to the nucha, and the linimentum aeruginis

was substituted for the caustic lotion. On the 9th of July, the ulcer on the lip was extending with great pain, which prevented her from obtaining sleep at night. A pill composed of pil. hyd. gr. ij. opii gr. 1-2, was ordered to be taken every other night, the quinine was discontinued, and a pint of porter daily allowed. At first, she appeared to improve a little, but towards the latter end of July, the disease was evidently assuming a more malignant character. The soap and opium pill, the application of the aqueous solution of opium to the sores, and six ounces of port wine per diem were next tried without benefit. The report states now (Sept. 19):—"The ulcer in the palate has formed a frightful excavation; a great portion of the upper lip has been destroyed by the ulcerative process; her power of articulation is in great measure destroyed; and her countenance has that pale and haggard appearance, betraying long suffering, and so characteristic of malignant disease, which this was now generally supposed to be. At this crisis it was determined to try the effect of the alterative and tonic action of mercury.

R. Hydr. oxym. gr. iij. micæ. panis 3j. p. conii 3j. Aq. dist. q. s. M. et div. in pil. xxx. e. quib. sum. j. ter quotidie. Extr. sarsap. ʒss. dec. ejusdem. ʒxvj. M. cap. part. 3 m. ē sing. pilul. The local treatment was directed to consist in the application of dry lint to the ulcer of the lip, and gentle pressure over that with strips of adhesive plaister.

"Sept. 25. The effect of this trial is decidedly favourable; the ulceration has not only been arrested, but the edges are contracting: the excavated ulcer on the roof of the mouth has put on a healthier appearance, without any local application, shewing evidently the beneficial effect of the medicine on the system." 114.

Her health now rapidly improved, and the ulcerations improved almost *pari passu*. On the 24th of October, she left the hospital well in health. There was an irregularity in the upper lip, and it did not completely meet the lower one. The pills had been diminished from three to one daily, prior to their being altogether discontinued. Prior to leaving the hospital, she again asserted that she had never suffered in any form or way from the venereal poison.

We are mistaken, if cases like these, are not regarded with interest, as examples of certain facts, rather than as illustrations of abstract notions. Setting aside all idea of direct or of reflected irritation, we will look on the last case, *per se*, as a specimen of what is frequently, too frequently indeed, presented in practice.

The patient had cachectic ulceration of the lip and palate, occasioning some exfoliation of bone, symptoms in short resembling those which occasionally follow syphilis, although she was not conscious of ever having contracted primarily venereal symptoms. For this affection she had taken large quantities of mercury, prior to her admission into St. Thomas's Hospital. The quinine not being productive of much benefit, she was ordered mercury again, in the shape of the blue pill. Under this, the disease became aggravated, and the oxymuriate and sarsaparilla were substituted with the effect of healing the ulceration that had resisted all other modes of treatment.

Is this or is it not to be regarded as an instance of mercurial cachexia? In the first place, we should observe that Mr. Travers omits an important point in the history of the case—the mode of its commencement. How did the ulceration originate? Did the patient take mercury prior to the

appearance of the ulcers of the palate and the lip, or did the latter precede, as was probably the fact, the administration of mercury? It is clear that knowledge of such circumstances is requisite to enable us to reason on the nature of the case, yet these Mr. Travers omits to mention.

But supposing the case to have been as it was considered, and, probably, as it was justly considered, an example of mercurial cachexia, would it not be advisable to refrain from the use of mercury in the treatment of such a case, until its employment became inevitable, that is, until all other means had failed? Cases of this sort are far from rare, and not unfrequently they are excessively intractable. In some instances, as in this, the patient is not aware of the occurrence of any primary venereal symptom. In others, though such primary symptoms existed, yet they seem scarcely adequate to account for the phenomena. A sailor, for instance, contracted simple gonorrhœa in some foreign port. He only discovered the complaint after the vessel had put out to sea. A shipmate had some calomel, and persuaded the poor fellow to take a large quantity. His mouth became extremely sore, ulceration attacked the hard palate, a great part of the palatine plate of the superior maxillary bone exfoliated, the upper lip ulcerated, and was nearly destroyed, and finally the greater part of the nose was lost by the extension of the ulcerative process.

An officer in one of the regiments employed in the Burmese war, suffered very severely from the destructive fever, that carried off a large part of our army. He took for the fever a great quantity of mercury, and his health was so broken that he was under the necessity of returning invalided to England. He had never had any venereal affection whatever. On his return to this country he came under our care with cachectic ulcers on the lower extremities, and nodes on each tibia.

In cases of this kind there appears to be little reason to doubt that the cachectic symptoms are owing to the injurious agency of mercury. The practice would therefore appear to be obvious to avoid, at all events, the medicine which has already produced such mischief. As a general rule, this is a good one—as a general principle mercury should be scrupulously abstained from in these cases. And the benefits derived from judicious general treatment are so great as to make the surgeon endeavour in all cases to give it a fair trial. Salines when any pyrexia exists—mild regimen—and good air—and when there is no pyrexia, the long-continued exhibition of sarsaparilla in various forms, combined with occasional purgatives—treatment we say, of this kind, regulated with judgment, and modified according to circumstances, will in many cases effect a cure, and in many more improve both the health and the local symptoms most materially.

But although the cachexia has been the result of the abuse of mercury, it is found in fact, whatever might be anticipated *a priori* to the contrary, that mercury in small doses is very often conducive to a cure, and sometimes even indispensable. Every hospital surgeon sees cases of this character. We may mention one by way of illustration.

Case. A policeman had gonorrhœa, which he communicated to his wife. For this he gave her, by a friend's advice, a quantity of calomel in pills. She was rendered very ill from the salivation and the depression induced by the mercury, and in the course of some weeks, vesicular eruption termi-

nating in crust appeared upon the lower limbs. We now saw this patient and ordered sarsaparilla. The eruption nearly passed away, and the patient appeared to be almost well. Two or three months after this, the patient returned for our advice. A fresh vesicular eruption had occurred, and, the scabs separating, had left a yellow cachectic-looking ulceration, healing on one side, but spreading by a sloughy border on the other. After quieting the pain and fever which existed, by saline medicines and by opium, we again prescribed sarsaparilla. At first it had a good effect, but after a short time the ulceration spread, and assumed a very foul and unpleasant character. We now ordered small doses of the blue pill, combined with conium and with opium. The amendment was almost instantaneous, and the ulceration rapidly healed.

The most troublesome cases are those which would seem to be a compound of venereal and mercurial symptoms. The patient has had at some period a sore, for which he took an excessive quantity of mercury. Symptoms of a cachectic kind have supervened, and these are brought under the notice of the surgeon, perhaps at a later period, and in an aggravated form. It would be inconsistent with our limits and our plan to pursue this subject farther, and we, therefore, return to Mr. Travers. The fifth chapter is headed:—

Of Constitutional Inflammations, as Examples of Reflected Irritation. Erysipelas. Cases. Gangrenous Inflammation. Carbuncle and Malignant Bubo. Cases.

We have not yet left the subject of reflected irritation. Whether successive chapters have contributed to make its mysteries clearer to our readers, we know not; but the present contains more observations on its nature, and further illustrations in the instances of erysipelas, gangrene, carbuncle, and bubo. We believe that most surgeons will agree with Mr. Travers, when he tells us that—

“Diseases of the constitution taking a local form, are not always, as I have shewn, of an inflammatory character; but when this local form exhibits inflammation in either of its processes, it is subjected to the influence of the constitution, and must be regarded and designated as a constitutional inflammation. The strumous ophthalmia and strumous sore throat are familiar examples. Where a diathesis prevails, an inflammation due to an obvious occasional cause, and having all the character of a simple inflammation in the outset, becomes in course of time adopted by the constitution, and modified by the prevailing diathesis; thus catarrhal inflammation terminates in phthisis, and an excoriated lip in cancerous ulcer.

When we view such an inflammation springing up spontaneously, as an action for which we can assign no external or visible cause, we see in its simplest and most genuine character, the constitution developed in the part, which, for want of a better term, I have called ‘reflected irritation,’ for neither the terms sympathetic nor secondary, would have been sufficient or correct, either as descriptions or as definitions. In either of the cases above proposed the irritation is reflected, for a slight deviation from the ordinary action of the part becomes the irritant in one case, as inflammation aroused by accident is in the other. What it is, that in the absence of external appearances, disposes particular textures to particular modes of inflammation, and disposes the sex, the age, nay, the individual, to the seemingly spontaneous morbid action, is another and distinct question:—but as changes of the part often precede those of the constitu-

tion, so those of the constitution often precede those of the part, and the natural susceptibility of one to the other becomes morbid; and thus even the ordinary action of a part may be the irritant of a diseased system, as a plethoric habit aggravates some local diseases. But to justify the term 'reflected,' it is not necessary either to suppose or to deny the pre-existence of any local affection; it comprehends the local and the constitutional origin equally, requiring only a local action sooner or later, which presents the prevailing morbid type of the constitution. This may be temporary or occasional, as in many cases of erysipelas—or permanent, as in carcinoma—it may be hereditary, as in some cases of inveterate scrofula, or bred in the individual, as in others—a result of contagion, or epidemy, as in hospital gangrene, or the reverse, as in carbuncle; a poison derived, as in lues; or a poison generated in the system, as in cancer; or an affection wholly distinct from poison, either natural or morbid, as in tetanus." 119.

If we understand Mr. Travers rightly, it is necessary in some cases, in order to complete the scheme of "reflected irritation," to make the natural action of a part an irritant to the constitution. It is difficult, perhaps, to exhibit or explain this; but so many difficulties surround the whole subject of irritation, whether direct or reflected, that one more or less does not greatly signify.

Passing, then, from this speculative question to a matter of fact, we may take Mr. Travers' description of erysipelas as something definite and tangible. That practical talent, it may be homely, which consists in a close observation of phenomena, the analysis of their varieties, and the appreciation of their combinations, is of a kind that the majority of men may comprehend, and that very many are apt to admire, on account of its immediate and obvious results. It is this sort of talent which has done so much in the discrimination of disease—which has exploded the old notions of white swelling and asthma, and a host of other unmeaning generalities. It dives no deeper than the physical qualities of things, and leaves the abstraction of processes, and sympathies, and so forth, to other inquirers and to other intellects. The thinkers of this school may be termed the utilitarians of science. We confess, on our own parts, a leaning to this description of utilitarianism, and we, therefore, gladly, turn to the practical subject of erysipelas.

Mr. Travers observes that the parts disposed to erysipelas are, first, the skin—secondly, the skin and subcutaneous cellular membrane—thirdly, the mucous and serous membranes.

1. *Erysipelas of the Skin.* This is the slightest form of the disease; slightest, that is, in point of structural implication, for sometimes it proves fatal, and frequently it is severe. The description of it is so familiar, that we need not insert it here. As Mr. Travers states, the erratic form of the disease, or its appearance in different regions of the body, or in distinct patches, with sound interspaces, at the same time, or in quick succession, is more serious than where the erysipelatous redness is continuous. It shews a debilitated state of constitution, and, generally speaking, tonics are more necessary for this than the other description.

2. *Erysipelas of the Skin and Cellular Membrane.*

"When the superficial appearance described above is attended by swelling from a serous effusion into the cellular membrane, it is distinguished by the term 'œdematous.' If, as happens from a variety of causes, this serous effusion is unaccompanied, nay, unpreceded by the inflammation of the surface, it is not erysipelas but œdema. The œdematous is the most common form of the disease, and is always important, but seldom dangerous, except when situated about the head, when it is always more or less so. The œdema is a mode of relief to the overcharged vessels, which either averts or stands in the place of suppuration, or facilitates it, according to the state of constitutional power. Thus it is a very frequent termination of the disease." 123.

We do not exactly perceive the gist of Mr. Travers' distinction between œdema and erysipelas. Œdema, according to him, merely wants redness of the skin to be erysipelas. But surely they are altogether separate things, œdema being merely effusion of the serous part of the blood, from pressure on the veins or from debility, while erysipelas is essentially an inflammatory affection. The two affections are so totally dissimilar, that we see no advantage in the institution of a comparison of any sort. There is no possibility of their being confounded. But to proceed.

"When from the violence of the action, or the loss of tone of the absorbent system, the effusion becomes excessive, the disease terminates by a process of suppuration, and one large diffused collection, or several smaller distinct collections of pus are formed in the cellular texture, which is spoiled and sloughy. The matter is of a thin consistence, secreted by the same vessels which have loaded the cells with serum under a continuance of the inflammatory action, an action incapable of the higher stage of adhesive deposition. The cellular texture dies, and with the effused fluids undergoes that state of decomposition to which the expressive term 'pourriture' is applied by the French. The entanglement of the matter by the shreds of dead cellular substance, renders it impossible to discharge such collections but by free incision, and the best practice is to incise them as soon as the suppurative process is manifested, by which their further extension is prevented and much relief obtained. As such collections are not indicated by what is called 'pointing,' the presence of pus is not always ascertained so early as is desirable, and it is sometimes not until matter is formed in great quantity, so as to fluctuate, that the surgeon is aware of its existence. This is a sort of delusion conveyed by the œdema under cover of which it forms.

The third termination of erysipelas is in gangrene—in which the skin dies along with the cellular membrane. This is rare, and happens abruptly and from purely constitutional causes; unless a result of excessive distention, as in enormous fascial abscess, or of disorganization from violence, as in bad compound fracture. It is remarkable, however, to what an extent the destruction of the subjacent membrane, following the inflammation and excessive distention of the skin, will proceed, without affecting the vitality of the latter. Upon the eyelid and prepuce, where its texture is peculiarly delicate, we oftenest see it die.

Gangrenous erysipelas is distinguished from gangrenous inflammation by the prior existence of the erysipelas, and its confinement to the integument, though diffused over a large extent of surface, as the entire or the half of a limb, for example. In gangrenous inflammation there is no such diffused swelling and redness as belongs to erysipelas, prior to the appearance of the phlyctenæ or sphacelated spots. When actual death has taken place in erysipelas of the trunk or limbs, the signs of distinction become faint and would vanish altogether, but that the extent and circumstances of origin of gangrenous erysipelas seldom permit of the maintenance of life long enough to observe the phenomena peculiar to it.

In the terminations of erysipelas above mentioned the adhesive process is passed over altogether, and this absence of the boundary which, like the hoard erected round a building under repair, precludes interruption to and from its neighbourhood, constitutes the strongest local character of erysipelas. Suppuration, when not so circumvallated, is an action without an object and as purely destructive as gangrene. For not only is the action without local check or confine, but it is also destitute of the material of repair, organisable lymph, the basis of granulation. I say organisable lymph, that which is essential to phlegmon and abscess, because the term phlegmonoid has been adopted to designate a variety of erysipelas, in which the effusion is of firmer consistence than the oedematous and suppurative, yielding less to pressure, and conveying no sensation of fluidity to the fingers of the examiner. The distinction is founded in truth, but the term must not be understood to convey that the matter effused is an organisable medium. In this sense we might as justly call carbuncle, phlegmonoid. A concrete albuminous matter, such as is seen after puncturing and emptying the vesicle of a powerful blister, is seen upon incision of this phlegmonoid erysipelas when the serum has drained away from the cells, which are distended by it to their utmost capacity—and with this, puriform matter, and in an advanced stage, sloughs are here and there intermixed.” 126.

The two preceding quotations present the whole of Mr. Travers' description of erysipelas, so far as the affection of the skin and cellular tissue is concerned. The separation between the simple cutaneous erysipelas, and diffuse inflammation of the cellular tissue is wide enough and clear enough to prevent much confusion in practice. But the two are not always so distinct, for they run into each other, and numerous intermediate forms exist, some approximating more closely to the cutaneous erysipelas, and some to the cellular inflammation.

The broad line of demarcation between the two affections is this:—that, in erysipelas, the inflammation begins in the skin, and affects the cellular tissue, consecutively—while in inflammation of the cellular tissue, *that* is first involved, and afterwards the skin.

In the simplest form of cutaneous erysipelas, that form which bears a very close resemblance to the exanthemata, the cellular tissue is scarcely, or even not at all involved. The disease runs its course in a week or ten days, and terminates in desquamation of the cuticle. Yet even in this some serous infiltration usually takes place in the subcutaneous cellular membrane, especially in that which contains no adeps, and after the subsidence of the erysipelas, small abscesses are often found in the situations we have mentioned.

In the next nosological grade of erysipelas, for though we leap from one distinct resting place to another, the advance of nature is more uniform and less abrupt, we find the cellular tissue more involved. The erysipelatous inflammation of the skin, characterized by the definite margin, is combined with much effusion into the subcutaneous cellular texture. This effusion is usually a combination of serum and lymph. It is serum and lymph in the commencement, but ultimately the lymph is almost always replaced by pus or mingled with it, and in a limb or a part of the trunk thus affected, we find in the latter stage of the affection the cellular tissue presenting here and there collections of matter, varying in size and in diffusion according to the severity of the attack and the constitutional vigour of the patient. If Mr. Travers intends to imply that the suppuration in the cellular tissue,

even in this severe form of erysipelas, is never strictly limited, we cannot altogether agree with him. We have seen collections of matter as circumscribed in erysipelas as in any other form of inflammation. The fact is, that much depends upon the patient's strength, and very much indeed upon the treatment. Judicious support, and the happy exhibition of stimulants and tonics, will often arrest the diffusive character of suppuration, and enable the constitution to limit it by a boundary of coagulated lymph. We may make one observation which we think will be found to be generally correct. Wherever, in the early stage, or during the progress of erysipelas, the hardness in the subcutaneous cellular membrane, arising from effusion of lymph into its texture, is perceived, there the surgeon may count on afterwards finding an abscess. In fact, whenever there is much effusion, even though the quantity of lymph be small, more or less suppuration almost always follows, and in elderly persons, or in those of enfeebled constitutions, not only is the suppuration extensive, but the skin also frequently dies.

Diffuse inflammation of the cellular tissue is allied to the form of erysipelas last mentioned. There can be little doubt that what has been termed erysipelas phlegmonodes, is really diffuse inflammation of the cellular tissue. This affection is a common consequence of injuries of the lower extremities, especially in the large metropolitan hospitals, and it forms the most serious and most fatal result of lacerated wounds and of compound fractures. We have watched these cases closely, and the following appears to us a pretty accurate account of the pathological phenomena and conditions which they present.

In a limb affected with diffuse inflammation of the cellular tissue, in a severe degree, there is first observed tumefaction of the limb in the vicinity of the wound. This tumefaction is evidently seated in the subcutaneous tissue, for it pits on pressure, although the pitting is not so deep as in mere œdema. Sometimes the part feels doughy rather than pits on pressure, sometimes it feels quite firm and resisting, sometimes it crepitates, in consequence of air being effused with the serum and lymph in the tissue. The skin of the swollen part displays some discoloration. Sometimes it is faint and rather florid, sometimes it is dark and more approaching to purple, more frequently in bad cases it is brownish and mottled. The margin generally is, but not unfrequently is *not* defined, and the redness of the skin never passes beyond the swelling in the subcutaneous cellular tissue, and commonly does not extend so far. With the progress of the affection, the swelling spreads up the limb, and the discoloration of the skin accompanies, or, rather, follows it. As the swelling increases the skin becomes stretched, it grows darker in hue, perhaps vesications are observed upon it, it sloughs, and the subcutaneous cellular tissue is discovered in a mixed state of suppuration and of sloughing, to an extent that a person unaccustomed to the affection would probably not suspect. Such are the phenomena of the disease displayed on the surface of the limb.

If we trace its characters by dissection, we find them to be these. In the earliest stage there is a quantity of bloody serum effused into the subcutaneous cellular texture, which is evidently more vascular than natural. Over this the skin is little if at all discoloured. This proves, of course, that the disease commences and has its essential seat in the cellular tissue. At a more advanced period, the vascularity of the cellular membrane is lost, and

the bloody serum is replaced by a deposition partly of pus and partly of lymph, which fills the cells. Over this the skin is decidedly affected, discoloured deeply, perhaps vesicated. Finally, the cellular tissue, distended by the deposition we have mentioned, is in a state of slough, and looks, as an author has well described it, like tow soaked in purulent matter. The skin may still retain its vitality, for some little time it usually does so, but sooner or later it dies, its death however being always consecutive to that of the cellular membrane below it.

This is a brief, but, so far as it goes, a correct account of the phenomena and pathological characters of diffuse inflammation of the cellular tissue, or phlegmonoid or gangrenous erysipelas, as it has been called. That it is not essentially seated in the skin must be owned by all who attentively study its phenomena, and that the principal interest, practically speaking, is connected with a knowledge of the state of the subcutaneous cellular texture, must, we think, be acknowledged also. In simple erysipelas, incisions are not necessary; in this affection they are absolutely indispensable. They are indispensable for the preservation of the skin, which, stretched by the effusion in the cellular tissue beneath it, and deprived of its vascular supply by the strangulating deposition in its cells, must inevitably die, unless the distension of the cellular tissue be removed, and its deposition allowed to escape by free incisions into it.

We must admit that it is difficult to say in all cases that this affection has not an erysipelatous character. But we must say also, that in the greater number its seat is unequivocally the cellular membrane, in which it begins, in which it runs its course, and to the state of which our attention must always be mainly directed.

We may now return to Mr. Travers. He adverts to erysipelas of the reflected mucous membrane.

“The conjunctiva, membrane of the fauces, of the air tube, of the rectum, and I believe, of the pulmonary and intestinal surfaces throughout, are occasionally the seat of this species of inflammation. It is rare by comparison with that of the external tegument, and perhaps chiefly occurring in the immediate vicinity of the skin, as where that membrane is reflected or modified by its relation to the function. The subjacent cellular tissue is involved in the inflammation, giving it the œdematous character, and it is probable that this tissue, pervading and connecting all the textures of the body, is in all liable to erysipelas, though not hitherto presenting itself to observation in such a form as to be generally so recognized.

The excessive chemosis of the muco-serous membrane of the eye, which ushers in the acute suppurative ophthalmia, indicates not less than its disposition to gangrene upon the cornea, that it belongs to this species of inflammation. In the pharynx and membrane of the glottis it arises from cold and causes operating constitutionally, in which it sometimes turns gangrenous, as in scarlatina maligna; and from wounds of the throat, or caustic substances applied or swallowed, the obstruction to respiration from excessive swelling is sometimes such as to demand tracheotomy to prevent suffocation. It is also sympathetic, more or less, with acute œdematous erysipelas of the head and face, in which disease the patient is generally from this cause deprived of the use of his natural senses of smell, taste, and hearing. The contagious property belonging to erysipelas is strikingly manifested in some of these cases. I have known it fatal to three of the same family within the space of ten days. In the rectum ligatures of internal piles, and of bleeding vessels, necessarily including a por-

tion of the submucous membrane, give origin to this inflammation; and I have seen it in several cases produced by the division of a fistula, in which erysipelas of the nates, and gangrene of the integuments surrounding the anus terminating the erysipelas, terminated also the patient's life. The peritoneum is exposed to this species of inflammation after child birth, and I believe that a large proportion of the puerperal cases are cases of erysipelas. The diffusion of the inflammation over the cavity, the non-production of adhesions, and the presence of flakes and albuminous matter floating in a curdlike serum, the sudden prostration of power, and the strongly marked property of communication, whether by contact or atmosphere, lead me to consider it as of this description. The absence of œdema is explained by the strictness of the subserous cellular texture. It is probable that the connecting cellular tissue in the interior of all structures, whether muscular, membranous, nervous, vascular, or bony, is subject to be so affected in those painful diseases which, under the denomination of chronic rheumatism and neuralgia, so frequently defy all our ingenuity of explanation and of treatment.

And yet more certainly we may conclude this to be the case in those deep-seated abscesses, necroses, and tumors hard and soft, which are accompanied with great bulk and consequent extension of all yielding textures, so as to threaten life as well as limb." 128.

It appears to us that Mr. Travers makes use of the term erysipelas in a very loose sense. At one time he employs it to designate a particular inflammation of the skin, resembling the exanthemata, and exhibiting certain well-known phenomena—at another he seems to make it represent a spreading inflammation of any description. This may be convenient, but is very lax. Mr. Travers, for instance, affirms that the puerperal inflammation of the peritoneum is frequently only erysipelas. To compare the former to the cutaneous exanthema would be obviously absurd; the comparison therefore must refer to erysipelas as a symbol merely of a spreading inflammation. Yet this is a substitution of words for words—it means nothing, explains nothing, and leaves matters just where they were. In this, as in many other instances of medical reasoning, we are forced to regret the disregard of the logical rule—to define strictly the terms we use, and to use the terms as strictly as they are defined.

We have seen some interesting cases of erysipelas spreading down the throat, and extending up the vagina and the rectum. We will briefly mention the particulars of one or two.

Case 1. A patient in St. George's Hospital had erysipelas of the head and face. About the sixth day the erysipelas became suddenly much paler, and the patient complained much of sore throat. On examining the throat, a dull red blush suffused the fauces and palate. The patient became delirious and was very low. In a day or two after the commencement of the affection of the throat, dyspnoea with cough, and obscure pain in the chest, supervened. There was the mucous rattle of bronchitis in both sides of the chest, and imperfect respiration in the lungs. In two or three days the patient died. On examination of the body, a slight vascularity was found to extend down the pharynx and into the œsophagus, and to spread down the larynx and trachea to the bronchi. The mucous membrane of the latter was slightly injected, and much mucous was contained in the tubes. The lungs were congested, and partially œdematous. We suppose that this must be viewed as an example of erysipelas extending down the air-tubes to the lungs.

Case 2. A girl in the same hospital had strumous corneitis, and some other affection which we do not at this moment recollect. She was attacked with erysipelas of the face, at a time when it was very prevalent in the wards. After a few days she was seized with sore throat, and the palate was seen irregularly inflamed. This was followed by obstinate vomiting, and dull pain in the epigastrium on pressure. Purging followed, and the patient appeared to be sinking under severe gastro-enteritis. About the ninth day after the commencement of the erysipelas upon the face, an erysipelatos blush was observed to surround the anus; from this it spread over the nates, and desquamated. It was spreading on the nates at the time of its desquamation on the face. When the erysipelas had become established on the nates, the symptoms of gastro-enteritis subsided. The patient recovered. This case excited much interest at the time. It appeared to be an instance of erysipelas, extending through the whole length of the intestinal tube. Be that as it may, the facts were as we state them.

Case 3. A girl was in the hospital, with a sore upon one nympha. After the application of caustic, erysipelas appeared upon the corresponding labium. It spread to the groin and beyond the anus, for a few inches upon the nates, where it stopped. But it also spread up the vagina, which, so far as could be seen, was dry, and presented a distinct erysipelatos redness. The patient rapidly became very low, and complained of dull pain in the hypogastrium, with tenderness on pressure in the public region. She had also great pain in micturition. Vomiting succeeded, and, in five or six days from the first appearance of erysipelas upon the labium, she died. On examination of the body, the mucous membrane of the vagina and of the uterus was found irregularly vascular; pus was contained in the cavity of the latter. The mucous membrane of the bladder was partly vascular and partly ecchymosed in patches. The peritoneum of the pelvis was inflamed, and purulent matter was found here and there in its recesses. The erysipelas, in this case, obviously extended from the orifice of the vagina, along that canal to the uterus and bladder. The inflammation of the peritoneum, on their exterior, must have resulted from the extension of inflammation, by continuity of tissue.

We might mention other cases, but the foregoing are sufficient. They are interesting as examples, fortunately not common ones, of the extension of erysipelas to the various mucous membranes, and of the consequences to which such extension may give rise. Occasionally, as Mr. Travers observes, erysipelas spreads up the rectum, in consequence of operations performed on the lower extremity of that gut, and this is not unfrequently a fatal accident.

We are not disposed to agree with Mr. Travers, in his supposition of the probability of the cellular tissue, pervading and connecting all the textures of the body, being in all liable to erysipelas, though not hitherto presenting itself to observation in such a form as to be generally recognized. That the inflammation of erysipelas may extend to any portion of the cellular tissue, we entertain no doubt; but we greatly doubt the advantage of stretching the application of the term erysipelas so far, as to make it include all diffusive inflammations. We may call such erysipelatos if we please; but we think that the term diffuse inflammation is wide enough to include the facts, and

liable to no misconception nor obscurity. The study of the phenomena of diffuse inflammation of the cellular tissue, in the different regions of the body, is interesting and important in a high degree. It has not yet received the attention which it merits, and it requires to be viewed as a substantive affection, not as a variety of erysipelas.

Mr. Travers draws a line of distinction between erysipelas and other inflammations of skin, which not unfrequently receive that name.

"Erysipelas is constantly confounded with inflammations of the integuments, which arise under different circumstances, and are of a distinct character. Thus the inflammatory œdema so commonly following the bites of leeches on the eyelids, prepuce, scrotum, and other cellular textures, parts much disposed to erysipelas; the sympathetic erythema, or even suppurative œdema, which takes possession of the integument of a limb, in inflammation of the fascia, veins, or absorbents, and in sub-fascial collections of matter; and the sympathetic blush of the skin covering a gangrene, as of the tunica vaginalis testis, or a mortified hernia, or a carbuncle, are denominated erysipelatous, by which it is intended to designate an adventitious form of the disease. The state of the integument which results from infiltration of the cellular membrane by an extravasated fluid, from sympathy with inflamed absorbents or veins, and from changes of the subjacent membranes, or accumulations beneath them, is widely differing from erysipelas; and we should greatly reduce the list of cases classed and reported under this head in surgical practice, if we would confine the term to those in which the skin, or skin and cellular membrane, are primarily affected.

If a portion of integument like the prepuce or eyelids swells, reddens, and, instead of simply suppurating and ulcerating, a central portion turns gangrenous and separates, leaving an ulcer penetrating the integument—a very frequent case—it is a misnomer to call it erysipelas. It is inflamed œdema, a disease altogether local.

Serous and purulent effusions in the cellular membrane are frequently met with, independent of any discoloration of the skin, as in many of the cases lately described under the term of 'diffuse inflammation of the cellular membrane'—and in the rapid œdema from substances acting as poisons on the stomach as well as in anasarca swellings. Commencement in the tegument, external or internal deficiency of adhesive inflammation, and a peculiar state of the system with which the inflammation is connected, whether spontaneous or the result of injury, are diagnostic characters of erysipelas." 130.

The sympathetic blush of a carbuncle, and inflamed œdema, are odd terms. In carbuncle, the subcutaneous cellular tissue is inflamed and dies, and the skin covering the inflamed cellular tissue is, as in all instances of inflammation of that tissue, inflamed also in a less degree. This, of course, is not erysipelas, yet it has almost as good a right to receive that name, as in the case of diffuse inflammation of the cellular tissue, when it commonly receives that designation. What inflamed œdema is, or, indeed, what the term can mean, we confess we feel uncertain. (Edema is a serous infiltration of the cellular tissue, and it is difficult to support the philosophical exactness of calling an infiltration inflamed. An inflamed tissue is sufficiently intelligible—an inflamed fluid effusion is much less so.

Mr. Travers having disposed of the *physique*, proceeds to the *metaphysique* of erysipelas. He likens it to tetanus, and our readers will see how.

"In what does the local disease consist? Inflammation, indicated by a preternatural fulness, color, sensibility of a portion of the skin derived from the

injection of its vessels with red blood, vessels which are in health transparent, and carrying only the colourless part of the blood; which, although capable of being affected by the permanently increased action of the heart, are nevertheless so far remote from, or independent of its ordinary influence, as to be unaffected by the state of the heart's action, and to carry on actions and processes without any obvious sympathy of the heart, as evinced by the general circulation. The sympathies of the skin are peculiar in being more direct with the brain than with the heart—the blush precedes the sensible increase of the heart's action, if any be perceptible, as the pallor precedes the state of syncope. So, also, the fever of scarlatina, measles, and small-pox precedes the eruption, and the inflammation of erysipelas precedes the fever. Such an interval not peculiar to erysipelas, but applying also to cutaneous inflammation from burns and scalds, as well as the injuries of cutting, tearing, and bruising the surface, tends to shew that the sympathy is slowly evinced between the heart and skin, as compared with that existing between the latter and the nervous centre. Hence I consider erysipelas to be a nervous inflammation, bearing to the actions of the vascular system, that irregular and undefined relation, which tetanus has to the actions of the nervous system. And it is remarkable, by the way, how the injuries are in their nature assimilated, which tend to the production of one or the other of these diseases." 131.

This pathology is somewhat transcendental, yet it may not be any thing the worse for that. But the whole, in this instance, is built upon a fact which we really feel some hesitation in admitting. Mr. Travers affirms that the fever of scarlatina, measles, and small-pox precedes the eruption, but the inflammation of erysipelas precedes the fever. Now this is just the point on which we believed that pathologists took their ground, in assimilating erysipelas to the exanthemata—we always imagined that the fever of erysipelas preceded the inflammation. We have seen a good deal of the disease, and certainly we have usually seen the fever usher in the eruption. Such a case as this is not uncommon. A man receives a scalp wound—on the third or fourth day he has a rigor, succeeded by decided fever. The surgeon is apprehensive of inflammation of the membranes of the brain. In 24 hours, sometimes after a much longer interval, erysipelas of the scalp appears. We have seen, on more than one occasion, the surgeon bleed the patient profusely, under the idea that inflammation of the brain was present, when the supervention of the erysipelatous eruption proved, that the fever was only its precursor.

It is much more easy to designate erysipelas "a nervous inflammation," than to explain what a nervous inflammation is. We, therefore, refer the curious reader to the pages of the work itself for further observations on this subject. We may, therefore, allude to a more intelligible point—the causes of the disease when idiopathic.

"Of idiopathic erysipelas the causes are referred to sudden changes of temperature, a humid soil and atmosphere—of which, particular conditions at uncertain periods of the year, render the disease more frequent. Especially, also, an unchanged, and therefore, as well as from other causes, a polluted atmosphere; such as the ill-ventilated apartments of the poor, and even of many old parochial and eleemosynary institutions, manufactories in crowded cities, narrow allies, and underground chambers, where running sores, and other uncleannesses additionally contaminate the stagnant air.

Indigestible food, exciting or depressing passions of the mind, excessive fatigue, or habitual indolence, coupled with a torpid and vitiated state of the great

secreting organs: luxurious living, and the habitual use of fermented liquors to excess, are among the causes which predispose to it." 133.

Thus we see in this, as in other instances, that causes the most opposite give rise, apparently, to the same effect. Heat and cold—fatigue and indolence—high living and low living, are ranked by our author as the causes of the disease. A category so wide would rather prove our ignorance than knowledge. Perhaps the general expression that approaches most nearly to the truth is this—that whatever deranges or checks the secretions tends, in certain habits, to give rise to erysipelas. This is vague enough, but its very vagueness is requisite to enable it to comprise all the facts.

When we descend to more particular, and less universal causes of the malady, damp and cold air may probably be ranked among the principal, if not the first. It is well known, at some of our London hospitals, that erysipelas prevails during a continuance of easterly winds, more than under any other atmospheric condition. It has always been remarked, at one of those institutions, that erysipelas was common when sore throats and catarrh were common also, and that both made their appearance when sudden changes of temperature took place, or when, as we have observed, the wind continued for any length of time to be easterly.

After some remarks on the reasons why it should attack the persons that it does attack, and why, being a disease of debility, it should invade, very shortly after accidents, persons who appear to be any thing but weak, Mr. Travers sums up his opinions in this manner.

"My own opinion is, from careful reflection on its history and phenomena, that erysipelas derives its local peculiarities from those of its seat, viz. the membranous capillary circulation; and from the intermediate influence of the nervous system between this and the heart, and all the other organs of the body, its peculiar pathology." 138.

In other words, erysipelas derives its *local* peculiarities from its *local* situation, and its pathology from the intermediate influence of the nervous system, between the capillary circulation and all the organs of the body. If reflection has led our author to nothing more clear nor more definite than this, we fear it is an instance of the chiaro-scuro, more adapted to excite admiration than to edify.

It has generally been conceived, that the skin sympathises more closely and immediately with the pulmonary and the gastric mucous membrane than with any other tissue or with any organ. But Mr. Travers believes that the sympathy of the skin and brain is more intimate than those that we have mentioned.

"Its sympathies (the sympathies of the skin) are universal, but the brain is the organ of sympathy, and it were as idle to look for any other medium of communication between the skin and the heart, the lungs, the stomach or the kidney, as to renew the search for the duct extraneous to the circulation between the two last-named organs, to explain the rapid transition of fluids. The skin is the organ, consequently, upon which a large proportion of the diseases to which the body is liable, make their attack—not so much by actual ingress as by disordering or arresting its function. Such is the commonest origin of fever, of visceral inflammation, of glandular, and many other diseases. It is remarkable in how many of its own diseases it suffers secondarily, or by sympathy with its fellow organ, the interior skin, or lining membrane of the visceral cavi-

ties and alimentary canal. With the pulmonary surface the skin sympathises in the noxious effects of atmosphere and temperature in all their qualities and vicissitudes, with the heart in its varieties of circulation from a thousand causes, with the stomach in the quality and quantity of its ingesta, and remarkably with the kidney, so as indeed, in some instances, almost to reciprocate its functions. But with none is its sympathy so active and so instant as with the brain, of which, in a certain sense, it may be regarded as a production." 139.

It is perhaps not quite certain that all sympathies between organs travel through the brain. The spinal marrow and the ganglionic system may probably do a little work in this way, and the experiments of Le Gallois, under the search for any other medium of communication than the cerebrum, may not be absolutely idle.

It would undoubtedly be absurd to deny the influence exercised by the nervous on the vascular system. Not to mention other instances, a familiar one exhibits the fact in a homely yet still in a striking manner. The blush, occasioned by the vascular suffusion of the cheek, is instantaneously produced by the agency of a thought.

Mr. Travers observes that all the predisposing causes of erysipelas are, in their nature, debilitating, while its exciting causes are such as irritate enough to produce inflammation. Does it ever, says he, appear either as a spontaneous affection, or as a result of injury in a sound condition of the system? He answers the question—never.

"The symptoms, as well as the causes, are such as characterise deficient power. In addition to those of passive congestion in the vessels of the brain,—as pain and a sense of weight extending throughout the body and limbs, confusion, lethargy, deafness, or wandering delirium,—frequent retching, which it is often difficult to appease, and a degree of prostration resembling that of typhus, which incapacitates the patient from moving in his bed, are symptoms of erysipelas, though confined to the extremities. A surcharged state of the veins and sinuses of the brain, and a quantity of the fluid beneath the arachnoid tunic are the principal, if not the only, recent changes observed in post-mortem examinations.

The apoplectic character is still more strongly marked when the disease affects the head. The patient is scarcely to be roused from his stupor, and the breathing is stertorous. I have seen maniacal delirium present, but it is rare compared with that of dreaming and muttering. All accidents accompanied with shock or concussion of the brain, or inducing an undue determination of blood to that organ, and especially wounds of the face and hairy scalp, are particularly prone to erysipelas. Indeed, it is a consequence of scalp wounds almost invariably, when closely bound up by stripes of resin plaster, to promote union. The practice is highly objectionable. On the other hand their edges should not, if clean incised wounds, be permitted to gape, as this promotes a diffused suppuration of the cellular membrane. The agglutinative should be unirritating, and the daily dressings light, with interspaces for the discharge. Sutures should never be employed." 144.

We do not agree with Mr. Travers in his unconditional condemnation of sutures. There are many kinds of scalp-wounds, in which it is impossible to keep the flaps of integument approximated without the application of a suture, and less pressure is necessary in the subsequent dressings if a suture is judiciously employed. As a matter of fact, we have frequently used one with advantage, and although it would be wrong to recommend their indiscriminate use, yet it is questionable if they ought to be totally proscribed.

The treatment of the disease is considered by our author at some little length. He believes that the best plan lies in medio between the two extremes of active depletion and active stimulation. As a general rule, there can be little question that this approaches the truth more nearly than any other. But, like all general rules, it admits of exceptions, and the rational surgeon would not select some treatment intermediate between the furious blood-letting advocated by Mr. Lawrence and the bark of Dr. Fordyce, and apply this to all cases of erysipelas that came before him. The robust countryman and the squalid London gin-drinker neither exhibit the same symptoms, nor can reasonably be deemed subjects for the same kind of treatment. In the first the pulse is full, the tongue white, the tint of the erysipelas florid—in the second, the pulse is weak, the symptoms verging towards prostration or typhus, the tint of the erysipelas pale or bluish. Such phenomena can never indicate the same remedial means, and it is as rational to endeavour to explain away their difference by a miserable joke upon milestones, or by a query where town ends and the country begins, as it would be to deny that a difference exists in the water at London Bridge and at the Nore, because no waterman could exactly point out the line of separation between the salt-water and fresh.

There are two great practical precepts in the management of erysipelas, which can seldom, if ever, prove fallacious—the first is, to endeavour to re-establish healthy secretions—the second, to be guided in the use of tonics or depletion by the general condition of the patient. In the cutaneous erysipelas, and in that in which the cellular tissue is involved, the first five or six days, or even more, are occupied with the increase of the eruption. During that period there is generally a good deal of febrile disturbance, and the symptoms are more or less inflammatory. From the sixth to the eighth day the eruption has usually attained its height, and part or the whole of it begins to desquamate. The constitutional symptoms at that period exhibit a remarkable change. The patient suddenly becomes much lower, nay, he may abruptly fall into a typhoid state. It is for this period and for this stage that the surgeon should anxiously watch. Prior to it, aperients to improve the alvine secretions and salines are in most cases the best remedies. They assist and they do not interfere with the operations of Nature. But so soon as the patient begins to exhibit the symptoms of depression, the surgeon must turn round and promptly administer support, if not stimulants. It should be recollected that this change occurs rather suddenly, and the patient, who the day before may have seemed in a condition of vigour and of active pyrexia, is found, perhaps, with scarcely any pulse at the wrist, and in a state bordering on, if not actual prostration.

Mr. Travers next touches on the practice of incisions. This he lauds, yet not more than it deserves. The proper employment of incisions is certainly one of the greatest of modern surgical improvements. It has saved both life and limb. The incisions should be sufficient to effect three objects—to relieve the tension of the skin—to evacuate purulent matter—and to expose and give adequate vent to the sloughs of cellular membrane. These are the objects to be held in view—the exact dimensions of incisions can never form the subject of any certain rule. Yet those of inordinate extent must certainly exhaust the powers of the patient without affecting any corresponding good.

"The incisions may be proportioned to the mischief to the extent of three inches, but seldom need or should exceed that space. They should penetrate the entire cellular structure, and if arteries of a size requiring more than the pressure of the finger for two minutes be divided, they should be secured by ligature. The venous bleeding is beneficial; arterial is neither advantageous nor safe, as has been sufficiently proved.* Two, three, or more such incisions may be made, if an entire limb is affected. Of the puncturing practice I have no favorable opinion. It irritates, without effectually unbinding or unloading, and is a cruel prolongation of suffering, especially when the disease is situated on the face and head." 148.

We cordially agree with Mr. Travers in these sentiments. From what we have seen of the "puncturing practice," we are inclined to think that, in severe cases, it is inefficient, and, in trivial ones, unnecessary. We are bound to believe, from the good opinion entertained of punctures by surgeons, whose judgment is undoubted, that they are occasionally beneficial, but, so far as we have seen, we cannot say that much advantage has arisen from them.

The last point connected with this interesting, because common and severe complaint, is its contagiousness.

"The proofs of the contagious character of erysipelas are more decisive, and unfortunately more abundant, than of almost any disease with which I am acquainted. When it prevails in a particular ward of a hospital, cases of accidents, and even trifling operations, should, if possible, be excluded from it. A patient, the subject of wound of any sort, should not lie contiguous to one affected with erysipelas. The idiopathic arises from the traumatic, as this from the former, and each from the same, as I have repeatedly seen. The practice of scouring the floors of wards and ships' decks has been supposed to contribute to its production, and the substitution of dry-rubbing the floors and decks, to relieve the ward and ship of the contagion. This practice, Sir Benjamin Brodie informs me, has been successfully employed at St. George's Hospital in wards so affected.

It is not to my purpose here to enter into this subject in detail, or attempt to analyze the character of the contagion, but I may observe, that it is an additional corroboration of the argument, that the disease holds that peculiar association which I have described with the nervous system; this being the organ by which the deleterious agency of the matter of contagion is first manifested, whether admitted by the cutaneous or the pulmonary surface. And the history of all the local contagious diseases agrees in shewing the nervous system to be primarily engaged in them to a degree over-proportioned to the vascular, whether plague or small-pox, scarlatina, or puerperal inflammation, or, lastly, as being the medium by which they prove destructive." 150.

Thus we see that Mr. Travers is a contagionist, *ad extremum*. If the proofs of the contagion of erysipelas are more decisive and more abundant than those of almost any disease, for instance, measles or small-pox, our author must have been more fortunate than the majority, even of contagionists. Erysipelas prevailed to a great degree in St. George's Hospital a few years ago. The question of contagion was examined very

* "If such patients are left but for a few minutes to bleed, they are left to die, and the object and end of this invaluable practice are misunderstood. A needless extent of incision not only increases this danger, but is open to other obvious objections."

carefully and closely, yet the proofs were far from numerous or satisfactory. We have seen a good deal of the disease ourselves, yet we feel great doubt in admitting that we ever witnessed one unexceptionable instance of contagion. We are not particularly sceptical in this respect, yet such is our sincere impression.

Our author relates eight cases of erysipelas. They present no features of peculiar interest, with the exception of one, which is instanced as an example of the disease affecting the mucous membrane of the throat. This we shall insert.

Case. "In the year 1819, a poor woman called to consult me under great distress of mind, having lost her husband a very few days before from a sore-throat. Except a general redness of the fauces, and slight tumefaction, there was nothing to create alarm, but her husband having died of the same disease after a very acute illness,* over which the remedies prescribed had no control, I entered into her apprehensions, and directed a copious venesection, blistered the throat, and ordered calomel and antimony at short intervals. At present she had no dyspnœa, but a difficulty in swallowing. I desired her to get away from her home, which she did for two days, but having a family at home, and finding the difficulty of swallowing increase, she returned, took to her bed and in two or three days died, under symptoms exactly similar to those of her husband. There was high fever and excitement to convulsion in the attempt to swallow, great tumefaction and irritability of the fauces, and lastly suffocation from impeded respiration, which took place only a short time before death. In consequence of my being absent, Mr. — was called to her assistance and performed the operation of bronchotomy, but without relief. On examination after death, I found the cricoid cartilage had been only divided, and that the edges had fallen together again, so that no permanent aperture existed. The inflammation was confined to the fauces, pharynx, and rima glottidis, the membrane being so tumefied by infiltration, as to prevent the passage of food, and lastly of air. A child was threatened with the disease, but by immediate removal to the hospital the inflammation was cut short before it assumed a fatal character.

I ought to add, that I had not the charge of the poor woman's case above related, but saw her at the instance of a respectable practitioner in her neighbourhood, who had attended her husband, and assiduously employed all the known means of arresting inflammation." 161.

This ought rather to be termed an example of erysipelatous inflammation, than of genuine erysipelas. The distinctive character of this disease, is the abrupt border to the redness, not to mention the phenomena of its progress and results. We see no evidence of the existence of such characters in the case above related. Perhaps the most appropriate designation would be, diffuse inflammation of the throat.

We recollect two marked examples of this affection.

Case 1. A woman had compound fracture of the patella. Suppuration in the knee-joint followed. Soon after this, an erythematous blush appeared near one elbow, and pus was distinguished in the subcutaneous cellular tissue; it was a purulent deposit. She went on thus for a few days, when she complained of great soreness of the throat. A general redness was ob-

* "The husband died suffocated, and I had been called to perform bronchotomy, but arrived too late; he had expired."

served on the soft palate, from which it extended to the pharynx. The difficulty of swallowing augmented to a great degree, and difficulty of breathing followed. In this state, the poor woman died rather suddenly. The throat was not examined after death.

Case 2. A gentleman, while intoxicated, was thrown from his horse, and received a lacerated wound of both legs, and a simple, but severe fracture of one tibia into the knee-joint. Erysipelas of both limbs followed, and incisions were required to evacuate much matter, in the subcutaneous cellular membrane. The patient was very low and exhausted, and the erysipelas was still spreading up the thigh, when he suddenly complained of extreme sore throat. Only a general redness could be seen. In twenty-four hours after this he died, the dysphagia being complete. On examination of the throat, a diffused redness was found to be spread over the pharynx and palate, and to enter the laryngeal cavity. There was some, but not much œdematous effusion in the submucous tissue of the pharynx and the larynx.

Mr. Travers occupies eleven pages with remarks on gangrenous inflammation. Yet we do not perceive any necessity for noticing them, as their principal object appears to be, to point out a distinction between gangrenous inflammation and the death of a part. Mr. Travers seems to think that this distinction is not generally recognised. We conceive, however, that most well-informed surgeons do not hesitate to acknowledge it in theory, and, indeed, in practice. The popular, and when we say popular we mean the prevalent notion, even in the minds of medical men, is vague enough, if not erroneous, and the term mortification is indefinitely applied to sloughing from erysipelas, to sloughing from diffuse inflammation of the cellular tissue, to mortification from deficient circulation, from cold, and so on. The only mode of obviating this confusion is, to study the individual affections carefully. To illustrate this remark, we will take the first case related by our author.

Case 2. Mrs. —, æt. 77, pricked the inner side of her thumb with a thorn, on the 13th of July, 1833. She was of a full habit of body, and had "bad flesh to heal," and had suffered, in addition, from anxiety of mind.

The thumb soon swelled, and became painful. On the third day a surgeon was consulted. The injured part presented a slight elevation, much inflamed; the thumb and wrist were somewhat swollen. The pulse was frequent and full, and there were feelings of restlessness, general discomfort, and irritability of temper. The part was opened by a lancet, when a very small quantity of pus escaped, along with the minute point of a thorn. The pain and swelling increased daily. In about a week from the time of the accident, the cuticle began to separate in the neighbourhood of the injury, and the cutis beneath poured out a large quantity of lymph, which coagulated into a thick gelatinous crust. The vesication soon extended over the thumb, palm, and back of the hand, and now the cutis, which looked like buff leather, presented at two or three points, ulcerated openings, through which the cellular tissue might be seen in a sloughy condition. A free division of the cutis was made in several directions: from the openings a little pus oozed out. Al-

though the whole cellular substance was one mass of slough, yet the cutis remained sound, was sensitive, and bled rather profusely when divided.

The pain now diminished, but the health became more deeply affected, and low delirium supervened. Each day brought an extension of the vesication and subcutaneous sloughing, which now involved the whole thumb and hand, part of the fingers, and the wrist: and the forearm was greatly swelled and inflamed. The extension of the sloughing was followed up by fresh incisions through the cutis. Invigorating constitutional treatment was employed, but only with temporary benefit. The slough separated from the parts near the original injury, leaving a dissection of the muscles and vessels of the thumb; in the rest of the wound there was a more healthy suppurative process, and the sloughing made no progress up the fore-arm. On the morning of the 9th of August, however, the twenty-seventh day after the injury, there was a sudden failure of the patient's powers, and about noon she expired.

This case is denominated an example of gangrenous inflammation. A close analysis of its characters shews that it was one of diffuse inflammation of the subcutaneous cellular tissue. That tissue being inflamed, pus was deposited in it, and it sloughed as it usually does. The sloughing of the skin was, as usual, secondary; it died, in consequence of the death of the cellular texture beneath it. Now surely it is better to term this affection what it was—diffuse inflammation of the subcutaneous cellular tissue, terminating in sloughing of the latter and of the skin, than to give it the vague name of gangrenous inflammation. For observe that, in the one case, the name definitively expresses the facts—whilst, in the other, the facts are not implied, though an accidental circumstance, the termination of the inflammation in sloughing, is. We say that this is an accidental circumstance, what logicians call an accidental mode. For the cellular tissue might not have sloughed, and then the term would have been inapplicable. It may be said that this is precisely the point, that the sloughing it is which renders the inflammation gangrenous. The answer is specious, but deceptive. In nine cases out of ten, nay, in ninety-nine cases out of the hundred, of diffuse inflammation of the cellular tissue, that tissue sloughs, unless incisions are made into it early; if incisions *are* made, the sloughing is arrested, and in parts where it has not yet occurred is prevented. Here, then, we perceive that the inflammation is or is not gangrenous, just as an accidental circumstance, (the employment of the knife) is present or withheld. Yet the mode and character of the inflammation must be the same in either instance. We, therefore, object to this kind of nomenclature as incorrect, and, by consequence, unphilosophical.

Several other cases, resembling in many respects the preceding, are related by our author. We may pass them by, as they present no features requiring particular remark. The following are not devoid of interest.

CASE 3. *Gangrene and Gangrenous Inflammation, from Ligature of the Femoral Artery for Popliteal Aneurism.*

A country labourer, æt. 45, had the femoral artery tied for popliteal aneurism. On opening the sheath of the artery, profuse hæmorrhage occurred, and, as the bleeding proceeded from the upper part of the incision, the opening of the sheath was extended, and the ligature placed higher upon the

artery, when the bleeding and the pulsation of the tumor ceased. A second ligature was placed below the first, and the artery divided between the two: the external wound was then closed, and the patient replaced in bed. The foot shortly became cold: hot bottles were immediately applied to the limb. At 7, p.m. the foot was still cold, and pain was felt in it and in the leg. On the 6th, the leg and foot were still cold, and about the internal malleolus was a dark-blue streak. In the evening, the blueness was increasing in all directions, and sensation was lost in many parts. 7th, The blueness increased, and is mixed with yellow: hard, bright, semi-transparent surface of the foot; all beneath the skin seems adherent to it; complete loss of sensation of the foot and lower part of the leg. Excessive pain about the calf of the leg, excited by the slightest touch. Friction, and the carbonate of ammonia, were the means employed. On the next day, the discoloration extended to within three inches of the head of the fibula, and was bounded by an indistinct white line. This white line became more distinct, and the leg below it grew darker. On the 10th, there were vesicles upon the leg. On the 15th, this was black, much swollen, and tender, with several vesications. On the 18th, amputation by the circular incision was performed above the knee. The patient ultimately did well.

This would seem to be, and we have given it as, an instance of mortification from imperfect circulation in the limb. We see no great evidence of the existence, in it, of gangrenous inflammation. At all events, it is clear that the process, whatever we may term it, was widely different from that which occurred in the case of the lady after the prick of a thorn.

The next case is a curious one. We shall give it in Mr. Travers' words, as it is short, and insusceptible of useful abbreviation.

CASE 4.—*Gangrene and Suppuration of the Hand and Fore-arm.*

"Sarah Ward, æt. 56; mother of a large family, long accustomed to drink freely of spirits and porter, with deficient animal, and, indeed, nutritious food of any kind, admitted 5th April, 1833. Three weeks ago, the summits of the fingers of the left hand became painful and swelled, with a sensation of pricking. The extremity, from the tips of the fingers to the shoulder-joint, is now swelled and variously colored, from a bright crimson to a dark blue; the disease bounded superiorly by a florid and exquisitely painful circle, the limb colder to the touch than natural, and exceedingly painful; the power of moving the fingers is lost, but they are not deprived of sensation. There is constant delirium, with high constitutional excitement; the pain confined to the limb. Half a pint of proof spirit, with a pint of the decoction of poppy-heads, to be applied warm every four hours, and a mild calomel and antimony pill to be taken night and morning.

10th. The same; to omit the pill, and take an opiate draught nightly.—Liq. ammon. acet. ̄ Vin. antim. 6 hor.

14th. Pain continues; delirium the same.—Ammon. carbon. ̄ Trā hyoscy. ex infus. serpentariæ.

These symptoms continued for about two months after her admission, the pain gradually diminishing, and then leaving her slowly, from above downwards: the appearance of the red circle above-mentioned descended, and the part above it resumed its natural and healthy character. The loss of sensation in the hand and lower half of the fore-arm, has been complete from a fortnight after her admission.

May. There is a circle of inflammation about four inches below the elbow,

and immediately below this is a line of ulceration, i. e. separation; the hand and arm below are dry, black, hard, and shrivelled.

July. In this state she remained, with occasionally a sense of darting pain at the organized extremity; the denuded tendons were divided from time to time at the ulcerated part, and nitric acid lotion applied.

October. The bone was sawn through, and a portion remains to be thrown off, around which the integument is adherent, so as to form a puckered stump. The brachial artery is quite natural in its pulsation and volumes, as is the arm in its general aspect." 191.

A case is given of gangrene of the left hand and arm. The patient was a very infirm old man. The arm was of a dark purple colour, cold and insensible, and emitted a very disagreeable fetor; in one or two places, the cuticle had peeled off. There was no distinct line of separation. The patient died. On dissection, there was found general ossification of the arteries and valves of the heart, particularly of the left subclavian artery.

Mr. Travers mentions the particulars of a case of *gangrena senilis*. An instance of sloughing of the fauces is more interesting. It was communicated to our author by Dr. Paris. The patient was a stout man, about the age of 50.

"On meeting Mr. P. professionally, as far as I recollect, about two months or more before his death, he asked me to look at his throat, which he said felt stiff and uncomfortable whenever he swallowed his saliva, and yet did not feel like an ordinary sore throat. Upon examination, I could not discover any thing very remarkable, except that the tonsils and palate presented a darker hue than usual. He complained, however, of general prostration, and his pulse was feeble. I advised him to use a stimulating gargle, and after having opened his bowels to take the sulphate of quinine. I do not, however, believe that he followed the advice with regularity; but he said he was better, and went to Ramsgate, from which place he returned and sent for me. I do not know the exact interval that had passed, but I should think about a fortnight. On my visit I found him still complaining of his throat, which had so much annoyed him, that he had, at his own suggestion, twelve leeches applied. I reprobated this practice, for I could see nothing more than a discoloration of the fauces, which had greatly increased since my last inspection. My plan was to support the powers of life, for which purpose quinine and a moderate quantity of wine were prescribed: the throat became more painful, and he could not put any of the muscles of the neck into action without much distress. As the disease advanced, he was unable to lower the jaw, so that all inspection was out of our power; the tongue became covered with dark matter; deafness came on, his memory failed him; the powers of life were evidently failing, and petechiæ appeared on the breast and legs; the respiration was laborious, and his constant exertion to expectorate from the throat was highly distressing. On introducing the end of a tea-spoon between the teeth, we could perceive a very large and loose slough, which Mr. M.—repeatedly attempted to remove by the forceps, but without success. On the night of his death, he brought up, by coughing, a considerable quantity of offensive dark-coloured matter, evidently portions of slough; his respiration became more difficult; a cold clammy sweat covered the body, the pulse failed and he died.

As far as I can recollect, I should say that, from the commencement of his indisposition to his death, an interval of two months occurred, one half of which he spent as a decided invalid, never quitting the house.

I believe I have mentioned all the leading features of this curious case; prostration of body and mind may be said to have constituted its most prominent peculiarity, without, in the first instance, any corresponding local affection in

the throat: that is to say, any local source of irritation in any way commensurate with the constitutional disturbance."

Mr. Travers concludes the chapter by a few words on the treatment of gangrenous inflammation. We here see exemplified the bad effects of a loose phraseology. We have already shewn that, under the denomination of gangrenous inflammation, several very different affections are included, and the same plan of treatment cannot be applicable to them all. This is a common yet a pregnant instance of the evils to which a loose nomenclature leads. The answer to the poetical inquiry—"What's in a name?" is obvious. In medicine, a great deal. The following general observations of our author appear to us to be highly judicious, and should be borne in mind by all practitioners.

"A mistake often committed by practitioners is an immediate recourse to stimulants: great additional mischief sometimes results from it. I have often seen patients restored under a gentle course of carminative aperients, with occasional salines, and a diaphoretic opiate at night, where severe sloughing had already taken place; the inflammation of the surrounding part has abated, and the progress of the destruction has been arrested, and then tonics and wine have been administered with the happiest effect. Sometimes the tonic has been premature, and the patient has suffered a fresh access of inflammation, and been compelled to fall back upon the antiphlogistic for a longer time. On the contrary, after a dose or two of castor oil, I have in other cases resorted to the tonic and wine with equal advantage. As regards diet, good nutritious broths and jellies, or even a moderate allowance of solids may be given as soon as there is appetite for them, and I need not add that, in such circumstances, diet should take precedence of medicine." 200.

There cannot be a doubt that in diffuse inflammation of the cellular tissue leading to sloughing of it—in erysipelas terminating in mortification of the skin or of the subcutaneous cellular membrane—and even in the more legitimate case of gangrene and of sphacelus, the use of stimulants and tonics is abused, and bark and wine and brandy are poured in, with too little previous attention to the restoration of the secretions.

The following are Mr. Travers' sentiments on bleeding:—

"In the presence of acute pain or in full habits with flushed countenance, I have bled once, and in the onset of gangrenous inflammation generally with advantage. I have also bled where the inflammation has been established and extending, and where the immediate margin of the gangrene (not arising from cold or chemical disorganization) has been of an intense red colour; but seldom, I must admit, with any obvious benefit or encouragement to a repetition." 201.

Here we see the difficulty of determining the exact cases in which Mr. Travers tried venesection. It would appear that there are cases in which this remedy is beneficial, although it must be owned that practical men enjoy few opportunities of seeing such. Though the loss of blood may be sometimes beneficial in the erysipelas and diffuse cellular inflammation that terminate, or tend to terminate in gangrene, yet the remedy should be used with discretion, and with caution. In the mortification resulting from cold or from defective circulation, we fancy that the lancet can be seldom dreamt of.

Local depletion is highly spoken of by Mr. Travers. Much must depend on the circumstances of the individual case, and on the judgment of the

surgeon. The local depletion that often suits best is that which results from the employment of incisions.

In the general treatment our author speaks highly, as most practical men have done, of opium. Attention to the secretions, and the proper exhibition of opium and of stimulants, may be said to constitute the essential principles of treatment.

We have now arrived at the termination of the first part of the present volume, excepting a supplement to the preceding chapters. That supplement contains what all must admit to be an eloquent defence of our author's views on the subject of irritation. From its very nature it is insusceptible of analysis, and ill adapted for criticism. We refer the candid reader to the work itself, if he wishes to see our author earnest in defending the opinions that he entertains. It is impossible for any one, possessed of the slightest portion of good feeling, to deny that, right or wrong, Mr. Travers takes high ground, and aims, if even he fails in arriving, at a high and intellectual course of study. With this general eulogy, which is not mere compliment, we enter on the consideration of the Second Part of the present volume.

This consists of five chapters. We shall not be enabled to complete the account of the whole in this article, but a short one in our next number will terminate the view of the matter which appears to us to be adapted for criticism or susceptible of analysis.

The first chapter treats—of the Nervous System and its Pathology—Sensation and Volition—Sympathy—Morbid Sensation—Morbid Action. For the opinions of our author on the various anatomical and physiological questions involved in the subjects here enumerated we must refer our readers to the thirty-seven pages of which the chapter is composed. Two sentiments, and two only, we shall quote.

“The physiology of the nervous system,” says Mr. Travers, “is at this moment in a state the most unsettled, and perplexed by conflicts both of anatomical detail, experimental result, and theoretical opinion. The mere record of these differences would fill a volume.” 227.

And “Experiment is extremely difficult of application, pregnant with fallacy; and closer examination convinces us that we are not yet in a condition to explain with accuracy the functions of the brain, as regards its several parts, more than the actual nature of those functions.” 231.

That experiments have done the greater part of what has been done in the advancement of our knowledge of the phenomena and laws of the nervous system, cannot, we imagine, be denied. But, as might be anticipated, an extreme race of experimenters have arisen, who have mangled living animals in every conceivable mode and degree, and supposed they could determine the laws of life by this wholesale species of butchery. Those gentlemen who have sliced the brain in all directions, and determined each function by each slice: who have ascertained, by the edge of the scalpel, that one part impels us irresistibly forward, another backward, while another directs us to revolve upon our axis: those gentlemen, we say, who have been betrayed by experiments into such absurdities as these, have been useful in their way, by proving that what seem the most exact foundations for reasoning, may, by blundering heads and in blundering hands, be made the means of leading to the wildest and most ridiculous extravagances.

There is a point beyond which experiments cannot usefully be carried, on account of the disturbing circumstances that interfere with their application and exactness. The man of judgment is he who can determine that point most closely, who will give to experiments their real value, and will give no more. Beyond that point we must seek in the observation of functions, and in their alterations from disease, in the study of facts, in short, and in analogy, the collateral information which can no longer be obtained directly from experiments. With these remarks we proceed to the consideration of the second chapter.

ON NERVOUS AFFECTIONS CONSEQUENT UPON LOCAL INJURY OR IRRITATION, AS EXAMPLES OF REFLECTED IRRITATION, MORBID AFFECTIONS OF THE SENSITIVE NERVES, HYSTERIA, NEURALGIA, MORBID AFFECTIONS OF THE MOTIVE NERVES, SPASM, TETANUS. CASES.

The following passage on the subject of hysteria is not unworthy of extraction. It embodies many of its very common and very important phenomena.

"The condition of system termed in females 'hysteria,' exists, under certain modifications, in the male sex. It is a morbid condition of the nervous system, most frequently induced by the artificial restrictions which society and custom impose on the generative functions, but at all events, by the predominant influence which these exercise over the general system. Sympathetic in its nature and origin with the derangement of this important organism, it is witnessed principally at the period which marks its evolution and early developement, but may exist at any point of the interval from thence to its decay.

The superaddition of this complex and mysterious mechanism to the simpler one upon which the preservation of individual life depends, is, under the negation of natural instinct, the prolific source of malady in the female, vague, various, and anomalous, beyond the compass of description. It is in the nervous system that its effects are displayed. Hence the digestive powers, the circulation, and all its subordinate functions, are troubled or interrupted, and the external senses, the temper, and moral character of the individual, even the faculties of the mind, are subject to be suspended, perverted, and impaired. The sensations especially are preternatural and morbid; and acute pain is referred to parts which may or may not have been the seat of injury, but which discover no vestige of inflammation or altered structure. In other cases, inflammation has run its course and left some slight traces of its existence, but none sufficient to furnish any satisfactory explanation of the suffering complained of. One very striking characteristic is the remittent and intermittent form of such pain, and the prevailing tendency to spasm; and with more or less caprice of appetite, irregularity of the secreting organs, and the habitual lassitude and exhaustion of the system, the absence of fever, and the maintenance of what is termed condition. Sleep, too, though uncertain and of short continuance, is generally obtained in sufficient proportion. Imagination is troublesomely alive and active, and hence the exaggerated descriptions, the reveries, phantoms, noises, dreams, bizarre similitudes, and odd conceptions of patients so affected.

How often have we known patients treated for supposed diseases of the lungs, heart, liver, who persisted in referring acute pain to one or other of these regions, aggravated on pressure, in whom evidence of generally impaired functions was apparently confirmed by the coincidence of certain symptoms commonly present in organic affections, and confronted at the same time by the palpable signs of the hysteric aspect and temperament, the habitual leucorrhœa, the suspended, scanty, or redundant menstruation, globus, pale urine, &c. &c. and especially the long duration of the disease without wasting." 268.

Within these last few years attention has been directed to many nervous affections in the female, which seem dependent on the state that, for want of a better name, we designate hysterical. Thus pains are experienced by young females in the joints, especially in the articulation of the knee, which have been and which are very commonly mistaken for serious disease, but which are in reality merely nervous. Pains are felt in the chest and abdomen, counterfeiting pleurisy, hepatitis, peritonitis, and other inflammatory maladies. Perhaps the leading feature of distinction between the genuine phlegmasiæ and these bastard hysterical complaints—is the disproportion between the pain and the attendant symptoms. In the hysterical affection of the knee, for example, although the suffering seems to be excessive there is very little swelling, and the progress of disorganization is not what it must have been, if serious disease had existed. Exaggerated pain, then, and comparatively insignificant general symptoms, or symptoms clearly marking the hysterical constitution, are the leading characters of local hysterical affections. They are so frequent as to render an accurate acquaintance with them indispensable to every practical man, who would desire to avoid the commission of daily and not inconsiderable blunders.

As Mr. Travers equally judiciously and feelingly observes, it is quite erroneous to suppose that such complaints are hypochondriacal, or in any degree simulated; there are none in which the patient is more willing to submit to severe and even deforming modes of counter-irritation, and none in which these more completely fail of giving relief. But though the patient is not conscious that the pain is mental, in one sense it undoubtedly is so, or rather it depends on a general state of system which exaggerates and vitiates the ordinary sensations.

In proceeding to discuss the subject of neuralgia, Mr. Travers points out analogies between it and chronic rheumatism, analogies, however, which we cannot think altogether unexceptionable. He observes, for example, that quinine and steel and arsenic and the volatile tincture of guaiacum and the cold baths are among the best remedies for chronic rheumatism. We really were not aware that the cold bath was a good remedy for chronic rheumatism, and we should feel extremely loth to prescribe it for a case of that complaint. Hot and vapour baths are ordered frequently enough, but cold baths, we suspect, are but charingly administered. But Mr. Travers, as we said, maintains the analogy between neuralgia and chronic rheumatism, and in its widest sense he explains it thus:—

“But as irregular circulation may depend upon many causes besides inflammation, and as there can be no doubt from the continual proofs which are exhibited to us, that the capillary circulation is especially influenced by the nervous fibre, and since as often before observed, irritation and inflammation are essentially distinct, it is not too much to infer that it is on the side of the nerves that the balance of action is suspended primarily, in cases presenting no symptom of inflammation throughout their course, if we except pain; and secondarily, in a certain proportion of bygone cases of actual inflammation, in which pain alone remains after all other signs of inflammation have disappeared. It is on this principle that I explain the sudden attacks of *tic douloureux* after exposure to the cold produced by evaporation—of sciatica after sitting on damp ground—of irritated nerve by an old unsound tooth, or a portion of dead bone, or any foreign body acting upon a nerve of sensation, as the ligature including a twig after amputation and its confinement by cicatrization, whence the pain of stumps long healed;—and thus that I reconcile the points of analogy between

the phenomena of chronic rheumatism and neuralgia in its largest sense, concluding that the morbid sensation, like the natural, varies according to the texture in which the nerve is distributed, and that the neuralgia may be and often is a secondary as well as an idiopathic or primary affection; and lastly, thus that I explain the efficacy and the success of similar remedies and modes of treatment in these different diseases." 280.

This explanation may carry more clearness with it to our readers than it does to ourselves. We unwillingly confess that it does not render our ideas upon the subject much more definite than they were before. Whatever the analogy may be, the distinctions between neuralgia and chronic rheumatism are obvious. The latter is clearly an inflammatory process, displaying during its progress the characters of inflammation, and exhibiting its sequelæ. The former neither presents the signs of distinct inflammatory action present, nor the traces of it past. And although it is true that general tonics agree with chronic rheumatism when very chronic, it is true also that local anti-phlogistic treatment is equally if not more beneficial. After all, the question is a very idle one, for we know so little of the real nature of either neuralgia or chronic rheumatism, that the explanation of one by the other, is little more than the attempt at defining one unknown quantity by comparing it to another equally uncertain.

Morbid affections of the motive nerves are next passed in review by Mr. Travers. If one set of muscles are paralysed, their antagonists prevail. Of this we see daily examples, and to it Mr. Travers alludes. He alludes also to some other kinds of paralysis.

"A modification of paralysis, sometimes congenital, sometimes occurring in infancy from dentition and other causes, is a deficiency of control, and consequently a want of sense in the action of muscles. These are the cases in which the child totters and is in danger of falling if capable of supporting himself, and the grown person with difficulty maintains his equilibrium, and in order to do so enlarges his base, performing all the motions of progression circuitously or by jerks. In these cases, which are depending upon an originally checked or imperfect developement, the entire voluntary muscular system is affected, so that stammering interrupts the speech as much as sudden halts the gait. In extreme age the loss of command approaches almost to the same state, but in this, permanent tremor or shaking palsy is more frequent; another modification of impaired nervous tone. That a condition somewhat similar may depend on the state of the cerebral circulation, is seen in the delirium tremens or tremulous excitation of drunkards and debauchees; it is also from the same cause an occasional and temporary consequence of severe nervous ailments and brain fevers. Overstrained and painful extension of the arm or leg will induce the same loss of command as regards their muscles, and to a certain extent, the undue interference of the mind with the effort. All these cases are arising from a deficient or impaired innervation, and are to be regarded as of a passive character." 281.

Mr. Travers, after speaking of chorea, adverts to a form of affection of the motive nerves, the nature of which is doubtful, and the character extremely obstinate. In it, the muscles are subject to be thrown into irregular and involuntary action by causes not obvious, and which must be supposed to depend on some mechanical irritation of their motive nerves, probably an unequal compression, from the encroachment of some bony growth upon the spinal theca, or the orifices by which they make their exit, or from contiguous bone in some part of their course, or a deposition in or upon their sheaths; it is generally but not always a painful disease. In this case, the sensitive being affected as well as the motive fasciculus, renders the first

suggested hypothesis the most probable. The affection is more or less extensive, peculiar to a limb, or affecting a part of the body, or even the whole trunk. It is sometimes incessant, rendering artificial support necessary to maintain even a precarious or deformed position, or accomplish progression in any sort; sometimes it occurs only in paroxysms at uncertain intervals, or in such efforts as require and cannot be performed without the action of the affected muscles.

This chronic convulsion is little if at all remediable. Mr. Travers attended, with the late Dr. Babington, a lady who had been afflicted thus for years, in the muscles of the nucha and left side of the cervical spine. No organic cause could be detected. The disease was not benefited by various modes of treatment, nor was the pain relieved by any narcotic or external application.

"There is a form (continues Mr. Travers) of the maniacal paroxysm in which the hapless lunatic will sing the same tune, utter the same cry, or repeat the same words, and perform precisely the same evolution or contortion of the muscles for days and nights together and suffer no interruption, with such accuracy and regularity, that the living machine seems converted into an automaton. Without any affection of the mind, one sometimes sees cases of involuntary motions of the muscles of the limbs or trunk, equally symmetrical in their order and extent, continued and resistless. Most extraordinary but well-authenticated cases of this kind are on record. We must refer these attacks to some temporary morbid condition of the brain and spine, without which they could neither be set agoing nor maintained. If superadded to organic change, they are not simply enduring but permanent; not intermittent, but subject to frequent paroxysm, and soon destructive from exhaustion and interruption of important functions." 284.

Epilepsy is next noticed by our author. When "diffuse epileptic convulsion" succeeds an injury of the head, it is almost always speedily fatal. Convulsion on one side and paralysis upon the other, as well as total paralysis, Mr. Travers has seen recovered from, after injuries of the head. As a symptom of apoplectic effusion in the brain, it has been, in Mr. Travers' observation, generally fatal. Mr. Travers mentions an interesting case of symptomatic epilepsy, which occurred many years ago at St. Thomas's Hospital, under the care of Mr. Birch. A boy who was admitted for these fits was discovered to have a pit or depression of the skull, upon which pressure created uneasiness. Upon that spot the trephine was applied, and the concave piece removed; at the instant of turning it up he had a sharp epileptic fit, and this was the last. From the internal table a spiculum, a quarter of an inch long, projected, pressing upon the dura mater. The operation threw as much light as the morbid growth upon the cause of the fits, the occasional state of the circulation rendering the membrane liable to the same offence as it received from the slight pressure or irritation occasioned in turning up the loosened piece.

As our author observes, a plethoric and exsanguous state are both conducive to the state of convulsion. It is not uncommon for persons to be affected with partial paralysis after great loss of blood for convulsive affections, symptomatic of disordered stomach. A dyspeptic gentleman who complained of pain in the head, with a slight degree of stupor, or rather slowness of intellect, and lost blood immediately by the advice of his physician, found that one side of his face was paralyzed after the operation, from which

state it has slowly and imperfectly recovered, though it happened two years ago.

Spasm of the involuntary is, fortunately, less frequent than that of the voluntary system of muscles. Yet a certain amount of spasm of the former is not very uncommon.

"When the muscular structure becomes inflamed, as in acute rheumatism of the heart, or the venous side being over-loaded it is incapable of relieving the pulmonary circulation, it becomes subject to spasm, which terminates life suddenly. When the supply of its nutrient blood fails from the constriction of the mouths or ossification of the walls of the coronary arteries, it is also subject to fatal spasm under any excitement which induces its increased action. The spasm of the pylorus, and of the gall-duct, and of the intestine in its course, are predisposed to by irritation of the villous surface, and is also a symptom of obstruction and inflammation. The pain attending these affections recurring at short intervals, is most acute, especially the spasm of the ureter, of the sphincter ani, and of the neck of the bladder in dysuria, whether from irritation or inflammation.

Spasm of the cremaster muscle is rare, but I have seen it so severe as to make the patient scream with the agony, the testes being perfectly sound, as well as when inflamed.

In all the cases we have referred to, irritation is a competent and frequent cause of spasm, which is a temporary, irregular, and involuntary action of muscles, attended with pain and followed by exhaustion, and often preceded by a notable or discoverable cause of irritation of the nerves supplying the part affected, either at their origin, in their course, or at their termination. The contractions produced in a fresh-killed animal by galvanism, convey the best idea of the connexion subsisting between the nerve and muscle, and the effect of irritation acting directly upon the muscle, or upon the muscle through the nerve." 289.

The following is a summary of the facts to which we have partially drawn the attention of our readers.

We have seen that the nerves of sensation and motion are subject to varieties of paralysis from checked or impaired developement and extreme age, as well as from disease incident to all periods of life. It may affect exclusively sense or motion, or include both. It may be partial, limited to one side, one limb, one district, and set of muscles, a single muscle, the point of a finger, or affecting the whole system. It may be a direct or an indirect result of injury or irritation, and the injury or irritation may be adjacent or remote. But as sensation and voluntary motion are principles, resident not in the parts, but in the brain and spinal chord, the deficiency must in either case depend on some interruption to the transmission, or some deviation in the supply of these faculties. Whether the cause of irritation exists in the organ of external sense or the brain, the stomach or the limb, the morbid alteration of sensation and motion is only to be explained by an alteration, organic or functional, in the brain supplying or nerve conveying the principles of sensation and motion. Hence if we amputate a limb, the man is troubled with the delusive sensation and motion of that hand or foot of which he is bereft from irritation of the remaining nerves, the instruments which conveyed sensation and motion, and the brain, the organ by which they were supplied. What determines the various modes and seats of paralysis of sensation or motion in cases of organic change, we have sometimes opportunities of seeing either during life or at its close; but in a large proportion of cases we see the symptom only, the cause is hidden from us. Still more is this the case with the affection of irregular muscular action, since a yet larger number of these are sympathetic, *i. e.* due to temporary circumstances, such as disordered circulation or innervation, and leave no trace behind." 290.

TETANUS.

The consideration of tetanus forms the conclusion of the chapter. We know not if Mr. Travers will throw much light upon this disease—as obscure in its pathology as uncontrollable in its progress. Mr. Travers, indeed, offers no systematic description of its phenomena, and wisely avoids that more than twice-told tale.

Mr. Travers, regarding the malady through the medium of his views on direct and reflected irritation, seems to think it a mistake to consider tetanus as divisible into idiopathic and traumatic. For, says he, whether the morbid contents of the intestinal canal, or the effects of a sudden chill of the surface, or an exhaustion of nervous power, or the irritation of an external injury, prove exciting causes of the tetanic spasm, the disease must be equally regarded as symptomatic, and the predisposition as the circumstance which explains the varieties of susceptibility. The same reasoning would equally apply to the case of most other diseases. Erysipelas, for instance, or pleuro-pneumonia, may occur idiopathically, or as a consequence of injury. By the division into idiopathic and traumatic, it is not meant to say that no local cause exists for the former, or that the mere injury constitutes the whole and sole cause of the latter. It is simply a rough and convenient nomenclature—founded on a very obvious distinction—and useful, because the two forms of the complaint are generally observed to display some differences. Traumatic erysipelas is usually more severe than the idiopathic form, and has a greater disposition to affect the cellular tissue; and traumatic tetanus is confessedly more violent than its idiopathic brother.

The period of accession of tetanus, after injury, varies from an hour to ten days or a fortnight. In some rare instances it is almost immediate. The case of a negro is recorded by Dr. Robison, in which the spasms commenced in a quarter of an hour after the infliction of a puncture with a fragment of china-ware: and some years ago a man was brought into St. Thomas's Hospital for a recent fracture, in a state of universal tetanus of tremendous violence, which proved fatal in a few hours. The fracture was an oblique one of the thigh-bone, which, penetrating the rectus muscle, was continually playing through its belly in a see-saw. Mr. Travers has seen the disease established, under similar circumstances, on the fourth day; the fractured portion had penetrated the vastus internus. This case was in Guy's Hospital, and proved fatal on the seventh day. The interval preceding the attack does not determine the form of the disease, *i. e.* the disease is sometimes of the severest and most rapid description where an interval of ten days has elapsed. The late unfortunate Earl of D—— was seized on the fifth day, from the accidental amputation of two of his toes by an axe. The disease was of the severest form and proved fatal on the seventh. On the other hand, where the disease follows close upon the injury, it is for the most part uncontrollably rapid and fatal.

The form of injury that occasions lock-jaw is subject to almost every imaginable variety, save one. Mr. Travers has never known a clean incised wound, as from the surgeon's knife, occasion it. Baron Larrey saw the disease produced by a fish-bone lodged in the throat, and two cases are mentioned by Mr. Morgan, following the blows inflicted by a schoolmaster with his cane, and both fatal. Even the injection of a hydrocele has been followed in the West Indies by locked-jaw; and Mr. Travers has now under

his observation chronic trismus, from the extraction of a tooth, with injury to the jaw. The most frequent seat of the injury is in the hand or foot.

"As we have said, the period of access varies, so must the stage at which the local injury has arrived; but in flesh wounds the period of commencing cicatrization, after the mundifying process is completed, seems to be most liable to the attack of spasm; not unfrequently the punctured wound, as from a nail, wears the aspect of being healed, and is almost forgotten when the spasms set in. These facts are now so established by repeated observation, that it is difficult to disconnect the phenomenon of the incipient spasm with the altered condition of nervous and muscular structure in the healing or newly-cicatrized part. Ligature of the funis umbilicalis, of the entire spermatic cord, and the anterior crural nerve, are among the known causes of tetanus. The former is common in hot climates; the two latter I have myself seen. Now cicatrization is adhesion and fastening of parts before free and moveable on each other, and approaches much to the nature of a ligature. In adverting to a mechanical condition, we of course admit all such varieties as may tend to the production of a similar effect, and we should expect that fastening a naturally free part would be equivalent to its strangulation or confinement by pressure of any kind, the interruption to its function being the same. Destruction of the part by caustics and its removal by amputation have been resorted to ineffectually when the symptoms have commenced, and I have twice known the disease ensue after amputation. But if, when the circumstances admit of it, wounds likely to produce tetanus, were treated while recent like those inflicted by a strange dog, so as to destroy, or at least alter the sympathies and mode of healing, it would probably be of more rare occurrence." 295.

We are disposed to agree with our author in his conjecture, that the alteration occasioned by contraction and consolidation of tissues, is operative in giving rise to the peculiar irritation that ends in tetanus. That it is not the sole cause is evident, from the variety of circumstances and conditions under which that disease originates; but still, of many causes, this appears a frequent one. We have seen one case and heard of another, (not to mention recorded instances), in which the puncture of a considerable nerve, and the subsequent formation of a sort of ganglion in it, by the deposition of coagulated lymph, gave rise to lock-jaw. In the case we witnessed, the internal plantar nerve had been punctured in climbing over an iron railing. On dissection after death, this nerve was found involved in a small hard cicatrix. In the case of which we heard, the peroneal nerve had been wounded by a pitchfork. It was similarly involved in a ganglionic cicatrix. Yet, in other instances, this occurs without the supervention of tetanus. We remember Sir Charles Bell's describing a case, in which the posterior tibial nerve became the seat of a sort of a ganglion, formed by the deposition of lymph, in consequence of a man falling from a height on a projecting substance that caught the calf of the leg. This individual suffered from the most agonizing pain in the course of the nerve affected. His tortures were such, that he gradually wasted, and ultimately died from their severity and continuance.

As Mr. Travers justly observes, the susceptibility to the tetanic spasm varies exceedingly. It is often seen that a wound or injury, so likely to produce the disease that we are daily on the watch for it, passes uninterruptedly through its stages; it is also seen by those who have the opportunity, that a menace or premonition of the attack is often decidedly exhibited, and yields to continued and active purging, or a free incision. Now and then, but not often, it takes the most experienced surgeon by surprise. In short we must

confess, that though sometimes, as in the instance of implication of a large nerve, we think we can philosophically account for the supervention of tetanus, in the majority of cases we are unable to lay that unction to our soul, and our ignorance must be honestly admitted.

Mr. Travers, indeed, seems inclined to lean to the hypothesis that places the general cause of tetanus in the alimentary canal—a hypothesis slightly countenanced by a small number of circumstances, but not plausibly supported by any extensive induction. Yet practically, the notion is not devoid of value, because it induces those who might otherwise neglect them altogether, to attend to the alvine excretions; and in chronic tetanus it is more than probable that such attention is necessary and useful.

In tetanus, says our author, who collects what has been observed in favour of its intestinal origin—in tetanus not only the most obstinate costiveness prevails, but when, by powerful medicines, the bowels are relieved, matters the most unhealthy and unnatural, as Mr. Abernethy observes, “quite unlike faeces,” are voided. We suppose the scybalous condition to be an effect, as probably it is, of the disease, but how do we know that the morbid quality, quantity, consistence, &c. of the contents of the canal were not existing previously to the attack of spasm, and operating with all the force of a powerful local irritant upon the highly irritable nervous tissue of the canal. Abrasions and small ulcers of the villous coat and mucous glands of the alimentary tube are seen continually in slitting open the canal, where they were wholly unsuspected; and he, Mr. Travers, knows no reason why, “when we find idiopathic tetanus and dysentery springing up under the same external conditions of the body, the local condition which is competent to the production of tetanus, from the analogy of the traumatic form, should not be so considered in that, of which the local cause is hidden during life, and, therefore, supposed to be simply a morbid condition of the general system.” The latter sentence and the latter thought are almost equally obscure. It is a pity that words are possessed of the power of simulating definite ideas. Their ignis fatuus meaning too frequently betrays the author and the reader into their pursuit, as of a real light. If the sentence we have quoted admits of the reduction into any expression, it is surely this, and nothing more—that as cold is a cause of dysentery and of tetanus, cold may be regarded as a cause. We have hunted through the devious thicket of words, and, in the tangled meshes, we beat up no other game than this. But to continue.

Drs. Macarthur and Dickson have given dissections, shewing inflammatory conditions of the bowels, in four cases of acute tetanus. We want more precise and extended information on this subject. Certainly the traumatic tetanus of this country does not bear out the opinion of visceral inflammation. Instances of indigestible substances, and of tape and round worms found on inspection of the canal in tetanic cases, are on record; and a case of trismus, under Mr. Earle, recovered after the expulsion of a tape-worm from the bowel.

We said that the theory which makes visceral affection the cause of tetanus will not bear examination, but still we repeat that in practice it should be remembered. Whether depraved secretions produce a disease or are its consequence, still per se depraved secretions are injurious. We proceed with the pathology.

In a considerable number of cases anomalous appearances of ossific deposition have been met with upon the arachnoid coat of the spinal chord, or upon the processes of the dura mater, and some unusual saliency of the

ridges or processes of the cranium has been noticed in examinations post mortem. Such appearances, certainly, cannot be regarded as necessary causes of tetanus, yet probably they operate by predisposing to undue irritability of the nervous system.

In the following sentiments we quite coincide:—

“I should say that the evidence before the public to establish that tetanus has its origin in inflammation of nervous structure has failed, and that few if any practical surgeons of experience entertain such a notion. The spine, the ganglia, the nerves of the wounded part have been repeatedly and minutely inspected in the worst cases of tetanus and other spasmodic disease, and no such appearance discovered. Even the common statement of increased vascularity and effusion beneath the investing membranes are as common in other acute diseases as in this, and these are by no means universal in tetanus. Very rare instances have occurred of a nerve being included in the injury, and palpably altered in consequence in common with other textures by inflammation; but even in such cases, I should, from reference to the whole phenomena, be inclined to question its operation as a cause, for wounds of nerves happen continually without betraying any tendency to the disease.” 300.

We coincide in the former, but we do not coincide in the latter opinion. No doubt there are many local causes of tetanus, but we do not see why injuries of nerves should be arbitrarily excluded from the list. The evidence on their side is every way as good as that in favour of the rest.

The following facts are not unimportant. After stating that there is no evidence of the direct implication of either the vascular or absorbent system in tetanus, Mr. Travers remarks that:—

“It has happened that inflammation of the bronchia and lungs has suddenly supervened upon the subsidence of the spasm, and in the form of effusion proved fatal in a few hours. So in a case I have already given, tetanus supervened upon erysipelas, and in another yet to be mentioned, the same thing occurred. The danger of metastasis is greatest in all those diseases which are essentially nervous, or being inflammatory, are under the special influence of the nervous system, as e. g., aggravated hysteria, chlorosis, and convulsion of all kinds: erysipelas, gout, rheumatism, &c. From the plunge of the cold bath I have seen the tetanic patient brought up a corpse, and I have known an hydrophobic patient expire in the spasm induced by the act of excising the wound. In neither case was there any premonitory sign of impending dissolution; the symptoms were but of a few hours. A gentleman under the care of Mr. Key, who had just recovered from a severe attack of tetanus, was thrown into a fit of passion by some ill-timed communication relating to his property, and died on the spot, probably from spasm of the heart. In a chlorotic girl I have known the shock of a shower-bath fatal; and chorea sometimes terminates suddenly in hydrocephalus. The tendency of erysipelas to seize the head, and rheumatism the heart, and gout the stomach is well known.

The practical inferences are two-fold which we may draw from these facts; the imperative necessity of procuring and preserving free and healthy secretions from the visceral glands, and of caution to avoid sudden shocks or surprises of the greatly debilitated system.” 302.

We observed that the facts were not unimportant, but we cannot help remarking that in the passage we have quoted, there is a strange mélange of circumstance and theory, of premiss and conclusion that does not seem to follow on it. Thus chlorosis, erysipelas, and rheumatism are placed in the same category—that of diseases essentially nervous, or, though inflam-

matory, being under the special influence of the nervous system. We scarcely know why either erysipelas, gout, or rheumatism should be said to enjoy the special benefit of nervous superintendence. Nor, supposing all this be literally true, do we perceive the justice of ranking sudden death from cold affusion as an instance of metastasis. We should call it an example of the bad effects of a sudden shock upon the system, and although, if hard-pressed, we might find it difficult to define what a shock on the system is, or the exact modus of its action, we think we could still be enabled to prove that it does not correspond with what is usually held to be metastasis. Metastasis is the translation of some obvious action from one part to another more or less remote. What proof of such translation can our author offer in the sudden death in the shower-bath of a girl affected with chorea, or in the equally sudden demise of a patient labouring under tetanus, when submitted to the cold affusion?

On the matter of fact we would offer a word or two. We may grant that hysteria is essentially a nervous affection, and perhaps we may admit that chlorosis is so too. But we are not equally inclined to allow that, in these complaints there is a marked disposition to metastasis. In rheumatism and in gout we have the best examples of this phenomenon. But observe the circumstances in either instance. The same tissue, a diffused and pervading tissue is in both cases affected. In rheumatism this is true *au pied de la lettre*. The fibrous or the cellular tissue is affected in the foot, and the fibrous or the cellular tissue is affected, if the pericardium or the pleura is invaded.

In the propriety of the following general observations upon treatment we agree. They do not exclusively apply to tetanus.

“The nervous pathology is to be viewed first, as regards its proper system; secondly, as regards its associations with the vascular. In such affections of nerves as are peculiar and exclusive, we may conform our treatment to the first view; in those which are resulting from or mixed with the arterial and venous system, we must modify it in obedience to that connexion. Pain, depending on a morbid condition of nerve, is aggravated by such measures as allay pain proceeding from inflammation. The same may be said of spasm not depending on inflammation or mechanical obstruction, inducing or threatening inflammation. In the acute stage of inflammation we do not give tonics; but in the chronic stage, where the consequences which it has left constitute the disease, we administer them most beneficially. In the paroxysm of intermittents, we carefully withhold such tonic remedies as exhibited in the intervals of the paroxysm break the train, and prevent its accession by fortifying the nervous system. Functional disorders and irregularities are counteracted and cured by such agents as operate upon functional, i. e. upon the brain and nerves; whether acting directly upon the trunk or the extremities of the arterial tree, upon the pulmonary or the aortic side, or not upon either directly, but intermediately.” 302.

Here we must terminate this article. In our next, we shall despatch the remainder of the work. It contains many facts, much reasoning, and a certain degree of speculation. Our habits and our conviction lead us to pay more attention to the former than the latter. There are some, we know, who look upon a disposition to relish mere facts, as evidence of an inferior kind of intellectual appetite. To those transcendentalists, we leave their piquant and unsubstantial viands, and, contenting ourselves with our homely but nutritious fare, we venture to expect a mental soundness which ragouts and sauces seldom give.

CLINIQUE MEDICALE OU CHOIX D'OBSERVATIONS RECUEILLIES
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[Third Article, continued from our last Number, p. 106.]

CEREBRAL HÆMORRHAGE.

WE shall now present our reader with a few of the more interesting cases of cerebral hemorrhage.

CASE 1.—Sanguineous Clots scattered through the Substance of the Circumvolutions of the Brain—sudden Loss of Intelligence—Resolution of the Extremities—Death in the midst of a State of Coma, 50 Hours after the first Appearance of the Attack.

A man, 49 years of age, was brought to the Maison de Santé in the following state:—State of coma, from which he could not be aroused—he seems as if plunged in a profound sleep; inspiratory movements succeed each other at long intervals; the four extremities, when raised, fall as inert masses; the severest pinching has not the slightest effect in making them move, nor is the expression of the countenance at all affected by it—lips not dragged; pulse 57. Such was his state in the morning, when we visited him. His friends told us that this man, having been for some time subject to some slight disturbance in his intellects, and being addicted to the use of ardent spirits, had complained of severe dizziness of the head the day before we saw him. These coming on at two o'clock, he suddenly lost the power of speaking, seeing, and hearing, and at four o'clock he fell into the state just described.—Such was the account we got. A large bleeding was prescribed sinapisms to the legs, and diluent drinks. The following morning his state was the same, except that the inspiratory movements, which were so very slow the day before, were accelerated, without the frequency of the pulse being increased. Thirty leeches were applied to the neck, and the head was covered with a bladder full of ice. In the course of the day, the respiration became more and more embarrassed, and the patient died at four o'clock in the evening.

Post Mortem. Considerable injection of the vessels of the meninges. On each side, over the convexity of the hemispheres, the circumvolutions presented a sort of fluctuation in five or six points, each the size of a tenuous piece. We had scarcely removed from one to two lines of the cerebral substance over these fluctuating points, when we found immediately beneath it some blood, slightly coagulated, contained in a small cavity, capable of containing a large hazel-nut. Around this cavity, the parietes of which were of a yellow colour, the cerebral tissue presented a bright red dotted appearance, but without any change of consistence. There were also from seven to eight small clots, seated in the circumvolutions of the upper surface of the right hemisphere, and nearly as many on the left. We found no other lesion in the encephalon. Walls of the heart were obviously hypertrophied.

Remarks. This case presents the very rare example of a case of hæmorrhage of the cerebral circumvolutions, without complication of any other effusion of blood into the remainder of the encephalon. The individual who was the subject of it, had nearly the same symptoms as those which are usually produced by a violent hæmorrhage taking place in the substance of one of the hemispheres. Dizziness preceded the attack of apoplexy; the latter presented as a predominant phenomenon, the suspension of the senses, and of the faculty of speech; then there came on a state of coma, in which the patient died, fifty hours only after the appearance of the first symptoms. The respiration was accelerated only towards the termination, and the pulse continued free from frequency up to the last. The absence of hemiplegia is accounted for by the presence of the apoplectic clots (foyers) in both hemispheres. We shall not forget to remark that, around each of these clots, there existed, for the space of some lines, a bright red injection of the cerebral pulp. The nature of the effused blood attested the recent date of the hemorrhage.

Thus, simple compression of the most superficial part of some cerebral circumvolutions is sufficient to abolish intelligence, to suspend the exercise of the senses and of speech, and to produce a coma which proved rapidly fatal. We find the immoderate use of alcoholic liquors a predisposing cause of cerebral hemorrhage. The commencing alteration of the intellectual faculties observed before the attack is not accounted for by the state of the brain. The coincidence of hypertrophy of the heart, and of cerebral hemorrhage, should not be forgotten.

CASE 2.—Cerebral Circumvolutions transformed into a sort of Erectile Tissue—small Sanguineous Effusions into this Tissue—Varicose Dilatation of the Veins of the Pia Mater—Perforation of one of them—Attack of Apoplexy. Death at the end of 24 Hours—Gangrene of the Lung.

A woman, 50 years of age, entered the La Charité during the month of October, 1820, in a state of emaciation, the organic cause of which could with difficulty be appreciated. No cough—no dyspnœa—dull sound under the left clavicle on percussion—respiratory murmur more obscure there than in any other part—no sweats—pulse habitually a little frequent—tongue pale and moist—appetite gone. For three weeks, we saw this woman waste away more and more every day; at the end of this time, she was suddenly seized with attacks of vertigo, which were succeeded by loss of consciousness after two hours. At the morning visit, her intellectual and sensorial faculties appeared entirely suspended—the limbs, when raised, fell by their own weight—those of the left side insensible to pinching—the right not so much so—respiration stertorous—pulse hard, but free from frequency. Death the same day towards evening.

Post Mortem.—Cranium. Veins ramifying over the net-work of the pia mater, covering the cerebral circumvolutions, were very much dilated at intervals—these were genuine varices; their parietes, soft and friable, were torn, and reduced to a kind of pulp by the least force. A layer of coagulated blood, at least six lines in thickness, covering the entire upper surface of the right hemisphere. After subjecting these parts to a stream of water, it was ascertained that one of the large varicose veins, which traversed the pia mater on the right, was perforated; it presented a large orifice, with irregular

jagged edges, which was in some measure stopped by a small clot of blood. On the posterior lobe of the same right hemisphere, there were remarked four circumvolutions, which, at their surface, were changed into a bright red. arcolated, fungus-like tissue, in the midst of which appeared three or four small cavities, each of which might admit a pea, and were filled with blood. In these parts the cerebral pulp presented not the least softening. *Thorax.* The summit of the right lung presented a portion, the size of an egg, black as ink, and changed into a liquid putrid substance, which exhaled an infectious odour. No communication as yet seemed to be established between this part, which was evidently gangrenous, and the bronchi.

Remarks. This is another instance of lesion of the encephalon limited to the circumvolutions. But their change differs in several respects from that presented in the first case. This alteration partly existed for a very long time before any cerebral symptom developed itself. The dilatation of the veins of the pia mater, and the softening of their wall, were certainly the effects of chronic disease. That remarkable developement of the substance resembling erectile tissue on the surface of some circumvolutions was also a chronic affection. The production of this tissue depended, in all probability, on the dilatation of the capillary veins of the cerebral pulp, which were thus affected with the same kind of lesion, as the external veins in which they terminate. But what is very extraordinary, all this morbid process went on without any appreciable disturbance of the cerebral functions resulting from it. Then a period arrived, when there was a simultaneous laceration of one of the large external veins, and several of the small veins, the dilatation of which gave to some cerebral circumvolutions the appearance of erectile tissue. Thence resulted a double effusion of blood, the one being in the pia mater, the other in the pulp of the circumvolutions; and then only was it that the cerebral symptoms appeared. Violent vertigo was succeeded by a complete abolition of the senses and of intelligence; then coma supervened, in which the patient died. The loss of motion in one side of the body, and its preservation on the other, shewed that only one hemisphere was the seat of lesion; which is contrary to what occurred in the first case. We may remark here that there was no symptom from which we could have suspected the gangrene of the lung observed in these cases.

CASE 3—Effusion of Blood into the Anterior Lobe of the Hemisphere of the Brain—Hemiplegia on the Right Side—Remarkable Embarrassment of Speech—Death on the 9th day.

A labourer, 57 years of age, entered the La Charité in the following state:—intelligence very dull—extreme difficulty in pronouncing his words: he commences several phrases, without being able to finish any; after articulating with great difficulty some few words, there is nothing afterwards heard but an unmeaning stammering. When he is spoken to for any time, he laughs and cries alternately. He can give no account of what happened to him. Face red, eyes injected. Left commissure of lips drawn up. This side of the face alone is moveable; still he complains equally whether the left or the right side of the face be pinched. Cannot by any effort put out his tongue. The two extremities of the left side are moved with ease; whilst those of the right side are deprived of all voluntary motion; the cu-

taneous sensibility does not appear to be diminished there. We find that four days previously this person fell down in the street deprived of consciousness, about 11 o'clock in the morning; that when brought home he did not recover it till the following day; and that since he has continued in the state described. During the four days following the tongue became dry and black, urine passed involuntarily, pulse frequent, extremities cold, respiration embarrassed, and he died nine days after the attack of apoplexy.

Post-mortem.—*Cranium.* The portion of cerebral substance which terminates anteriorly the left hemisphere, is marked by a cavity which might contain a pullet's egg, and which is filled by a large clot of blood. This cavity commences an inch below the upper surface of the hemisphere, and a half an inch from its anterior extremity; posteriorly and inferiorly it is bounded by the portion of cerebral substance which forms the point of junction of the superior and anterior walls of the left lateral ventricle. Both this latter and the corpus striatum are perfectly intact. The parietes of the accidental cavity present on their internal surface a bright yellow colour which is continued two or three lines in depth. The cerebral substance nowhere softened. No other appreciable lesion in the brain. *Thorax.* Lungs infarcted, and *hepatized* also in several parts—heart large—hypertrophy of the left ventricle. *Abdomen.* Red softening of the gastric mucous membrane in its left half—slate-coloured tint of the pyloric portion. Numerous arborisations in the small intestine—spleen large and very soft.

Remarks. This case has been cited, as an instance of hemorrhage exactly limited to one of the anterior lobules of the hemispheres. According to the theory which attributes the direction of the movements of the lower extremities to the anterior part of the cerebral hemispheres, we should only have found here paralysis confined to the lower extremity of the right side, and yet the upper extremity of the right side was equally deprived of motion. The paralysis extended also to the right side of the face, and the motions of the tongue could no longer be performed. The articulation of the words was become very difficult—a circumstance which is found in accordance with the opinion put forth by Dr. Bouillaud with respect to the encephalic seat of speech. We content ourselves with noting here these different facts, proposing to ourselves, in our recapitulation, to add them to others for the purpose of resolving the important questions to which we have just referred. At the same time that the power of motion was abolished in one side of the body, sensibility was preserved intact on that side. With respect to intelligence, it was singularly dull; memory seen gone altogether. The commencement had been marked by a sudden loss of consciousness, and here again there was a coincidence between a cerebral hemorrhage, and a hypertrophy of the heart. It was not in consequence of this hemorrhage that the patient died. The perfectly sound state of the brain around the apoplectic clot was a good condition for the absorption of the effused blood. Death was the result of a twofold inflammation, that of the lungs, and also of the stomach, which particularly developed itself by the adynamic state into which the patient so suddenly fell. Such a mode of death is very rare in apoplectic subjects.

CASE 9.—Effusion of Blood into the Corpus Striatum of the Right Side—

—*Sudden Loss of Consciousness—Hemiplegia on the Left—Death the 15th day.*

A woman, 48 years old, addicted to wine, fell to the ground suddenly deprived of consciousness, on the 16th of March, 1823. A little after she was bled—at the end of two hours she came to herself—she entered the La Charité the same evening. On the next morning we found the two extremities of the left side completely deprived of motion and sensation. The right commissure of the lips was drawn upwards—intellect perfect—pulse hard, vibrating, and a little frequent. Blisters were ordered to the legs, and purgative mixture. On the following day a visible amendment. Sensibility restored in the paralysed side. The left lower extremity begins to perform some movements. The left upper extremity as much paralysed as on the preceding day. The 19th, she moves the leg and thigh of the left side with ease. Pulse not frequent. (A blister between the shoulders.) From this period to 1st April symptoms of gastro-intestinal irritation manifested themselves; tongue red and dry; great thirst; tension of the abdomen; diarrhœa. Delirium soon came on; the patient died in what is called the adynamic state. The paralysis of the lower extremity of the left side had been completely removed, not so of the upper.

Post-mortem.—Cranium. The only lesion presented by the encephalon was in the right corpus striatum. Towards the middle part of this substance, some lines beneath its upper surface, was found a small cavity filled with clots of blood. Around them the cerebral pulp was very soft for the space of three or four lines. *Thorax.* Hypertrophy of the walls of the left ventricle of the heart, with contraction of its cavity. *Abdomen.* Gastric mucous membrane very soft and red through the entire splenic portion. Intense redness, and as it were granular appearance of the inner surface of the ilium, through a great portion of its extent.

Remarks. It is rare to find hæmorrhage so exactly limited to the corpus striatum, as in the above case. The commencement of the affection was similar to that of the generality of cerebral hemorrhages, whatever be their seat. The sanguineous effusion being inconsiderable, the patient soon recovered the use of her senses, and her intelligence continued quite perfect, which in this case may be referred to the seat of the hemorrhage having taken place far from the substance of the circumvolutions. At first the two extremities of the side opposite to that of the sanguineous effusion were equally paralysed, which already invalidates the opinion according to which isolated lesions of the corpus striatum should modify motion only in the inferior extremity. But this is not all; one of the paralysed limbs soon recovers the power of moving, and that is the lower extremity, that is to say, that limb which, according to the opinion just now mentioned, should alone have continued deprived of motion. Thus the more we advance, the more will these facts come to destroy, or at least to stagger assertions too hastily made. There was no appearance in this case of any curative process having been set up around the hemorrhagic cavity. The most alarming cerebral symptoms had however ceased, and it was under a complication of gastro-intestinal inflammation that the patient sank. She too had hypertrophy of the heart.

Having thus selected from our author's cases such as seemed most likely

to engage the attention, we shall now proceed to the general results and inferences which he has drawn from them. He first considers the functional disturbances occasioned by cerebral hemorrhage, and then endeavours to ascertain how far the differences in these disturbances may be explained, either by the extent of the effusion, or the difference of its seat. And first he considers the—

Lesions of Motion. The most characteristic symptom of cerebral hemorrhage is paralysis, there being no instance known of hemorrhage into the cerebral parenchyma which was not accompanied by some affection of the faculty of motion. This paralysis appears at the moment the blood is effused—it presents great varieties with respect to its seat, varieties which pathological anatomy is very far from being able to explain. It may be divided into general paralysis, and that which is partial. The first exists, when the two sides of the body, whether entirely, or in some of their parts, are at once deprived of motion. This general paralysis may occur in the three following cases:—

1st. In the case of simultaneous or successive hemorrhage into the two hemispheres. 2d. In the case of considerable hemorrhage into only one hemisphere, with destruction of the parietes of the corresponding lateral ventricle, escape of blood into this ventricle, and from this into the other cerebral cavities, either through the natural orifices of communication, or through the lacerated septum. 3dly. In the case of hemorrhage into only one hemisphere, without effusion of blood into the ventricles, but considerable enough to have broken down the greatest part of the substance of this hemisphere. In the case of general paralysis, the four extremities fall as inert masses, and we may always observe loss of consciousness and profound coma inseparable from it—this species of paralysis however indicates with less certainty the occurrence of cerebral hemorrhage, than that of one half the body; the latter form being one of the surest signs of hemorrhage into the brain. The paralysis consequent on cerebral hemorrhage, is that of the two extremities of the side opposite to that where the effusion takes place. When the two extremities are simultaneously paralysed, they may be so in an equal degree, which is very rare; for it is in the upper extremity that the loss of motion is in general most complete. The moment when the hemiplegia occurs coincides in many cases with complete loss of consciousness, and then the individual so attacked may fall in any direction. But when this loss of consciousness does not take place, the patient suddenly feels the lower extremity which has been just paralysed suddenly withdrawn from under him, and he falls on the side of the hemiplegia, though he still preserves his consciousness. Hemorrhage of the cerebral hemispheres may also merely produce paralysis of a single limb, sometimes of the upper, and sometimes of the lower extremity. Recently some facts have been published with the intent of proving that paralysis of the upper extremities depends on a lesion limited to the optic thalami, or to the nervous mass on their level, and behind them, and that paralysis of the lower extremities depends on lesions of the corpora striata or of the nervous mass, on a level with and anterior to them. M. Andral endeavoured to ascertain the truth of this theory, and to that end he selected 75 cases, in which the hemorrhage was so circumscribed as to qualify them for assisting in the solution of the ques-

tion. Out of these 75 he found 40 in whom the two extremities of one side were simultaneously paralysed. Of these 40 there were 21 in whom the seat of lesion was in the interior lobe, or corpus striatum, and 19 in whom the lesion was seated in the posterior lobe, or optic thalamus. Of these same 75 cases we found 23 in whom the paralysis was confined to the upper extremity, of whom eleven had lesion of the corpus striatum or anterior lobe, 10 with lesion of the optic thalamus or posterior lobe, 2 with lesion of the middle lobe.

Again, of these same twenty-five cases, we found twelve in which the paralysis was confined to the upper extremity, in ten of which the seat of the lesion was in the corpus striatum or anterior lobe, whilst in two the lesion was in the optic thalamus or posterior lobe.

From these facts we are led to the conclusion, that in the present state of science, we cannot yet assign in the brain a distinct seat for the motions of the upper and lower extremities. No doubt such distinct seat exists, since each of these extremities may be paralysed separately, but we do not yet know it.

At the same time that the extremities of one side of the body are paralysed, other parts also may be similarly affected, but in different degrees; these parts are commonly the following; the globes of the eyes—the eyelids—the different parts of the face—the lips—the tongue—the neck—the larynx—the pharynx and œsophagus—the bladder—and the rectum.

Of all these parts there are none whose paralysis is as common as that of the extremities, nor does it present itself with equal frequency in the other parts. Thus the different parts of the face, and the tongue are more frequently the seat of it, than the other parts above-mentioned.

Paralysis of the muscles which move the eyes is denoted by the constant deviation of the latter in some one direction; strabismus is then generally observed; but this phenomenon itself is very rare, and it is scarcely ever noticed in the numerous cases published on cerebral hemorrhage. We have ourselves met it but seldom. In order to its production it is necessary that the muscles antagonizing those which carry the eye downwards and inwards should be paralysed.

The muscles forming the parietes of the cheeks lose the power of contraction much more frequently than the preceding, in cases of cerebral hemorrhage. The buccinator is the muscle whose paralysis is most perceptible. Every time the patient expires, one of the cheeks is observed to be passively distended, and also at the same time one half of the lips corresponding to it; and when subsequently the patient wishes to masticate, the food introduced into the mouth and placed on the side of the paralysed buccinator can be no longer acted on by it, and becomes collected between the cheek and the teeth, until removed by mechanical force.

In all the cases we have met, and in all those published with sufficient detail, the paralysis of the buccinator muscle has taken place on the same side as that of the extremities.

The passive distention of one cheek we generally found to take place only in very severe cases, and where there was at the same time loss of consciousness.

The muscles which move the lips often retain all their power of motion, so that the commissures present no deviation whatever. But at other times,

these muscles are paralysed, and in consequence of their antagonizing power being destroyed, the commissure is drawn to the opposite side and outwards, and at the same time it inclines sometimes upwards and sometimes downwards. In the great majority of cases the deviation of the commissure is towards the side opposite the hemiplegia; it is consequently on the same side as the paralysis of the limbs, that the paralysis of the muscles takes place by which the lips are moved. Oftentimes when no motion occurs, and as long as the mouth remains closed, there appears no deviation; but this becomes perceptible, when the patient speaks or smiles. The degree of deviation of the mouth is not always in the direct ratio of the degree of hemiplegia. We have seen it very marked in cases where the paralysis of the limb was but slight; whilst we have found it absent, where the hemiplegia was complete—

The tongue with respect to its movements presents very different states in individuals attacked with cerebral hemorrhage. In the first place its movements may remain perfectly free. Persons, after having continued several minutes unable to move it, appear suddenly to recover this power: they protrude it abruptly from the mouth after a great effort; but there are some movements which they cannot give the tongue until after considerable intervals—some cannot protrude the tongue—some are unable to articulate—others who are able to protrude it, cannot put it straight from the mouth. According to M. Andral's experience the apex of the tongue always deviates to the paralysed sides. A consideration of the anatomy of the muscle by which the tongue is protruded will show that such must be the case. Paralysis of the muscles of the neck is but very rarely observed in cerebral hemorrhage. The head then is observed to incline to the paralysed side, whilst the face is turned to the opposite side. Paralysis of the respiratory muscles is only observed in that species of apoplexy, called from its severity and the rapidity of its effects, *apoplexia fulminans*. Aphonia is sometimes observed, owing to paralysis of the internal muscles of the larynx. Paralysis of the muscles of the pharynx and œsophagus is observed only in the most serious cases, and is always a fatal symptom. Paralysis of the bladder is by no means so common as has been asserted. We shall return to the subject, when we come to consider the sensibility of the different parts as affected by cerebral hemorrhage, to which, as being peculiarly interesting in a practical point of view, we shall now direct the reader's attention.

CHAP. II.—LESIONS OF SENSIBILITY.

These lesions are much more constant in cases of cerebral hemorrhage than those of motility; and, up to the present time, it has been impossible to detect, in the nature or in the seat of the alterations of the brain, the cause which sometimes suffers the sensibility to be intact, and sometimes produces its more or less complete abolition.

We shall now consider these lesions of sensibility: 1mo, in the skin; 2do, at the surface of the different mucous membranes capable of being touched; 3tio, in the organs of sight, of hearing, of taste, and of smell; 4to, in the encephalon itself.

1. *Lesions of the Cutaneous Sensibility.* These must be considered at two

periods—both before the hemorrhage has taken place, and after its occurrence. Before the period when the hemorrhages come on, many persons experience nothing particular towards the cutaneous periphery, but with others it is not so. The pulp of the fingers becomes the seat of divers sensations: several complain of having in their feet a singular feeling of cold, a sort of numbness, similar to what is felt when the hand is plunged into the frozen water—others complain of pricking sensations, or annoying formication towards the extremity of the fingers; others, again, fancy that there is a piece of cloth interposed between the skin of their fingers and the body, which they would touch; so much blunted is their sensibility. These different sensations may be confined to the hands, they may extend to the feet—they may even manifest themselves at other points, either of the extremities or of the face or trunk. We have seen the case of a man, who, before being struck with apoplexy, experienced, from time to time, complete loss of sensation in some isolated points of the skin of the thorax. Each of these points, which were to the number of five or six, might be about the size of a five-franc piece. There the skin might be pinched ever so severely, without the patient seeming to feel the slightest pain; outside these points the sensibility was intact, and it soon re-appeared in all its integrity. These partial abolitions of the sensibility were not constant; there were some days when the sensibility was not diminished in any part—then, suddenly, it disappeared from the parts just now mentioned. Another patient after having left the La Pitié, where he had been treated for an intense erysipelas, principally seated in the left side of the face, cranium, neck, and back, entered again at the end of two months, with total loss of the sensibility of the different parts of the skin, where the erysipelas had been. Thus, the skin of the face of the left side, that of the scalp of the same side, and also that of the neck, from the median line to the level of the top of the shoulders, had lost all sensation. On this same side, hearing, sight, smell, and taste were also nearly destroyed; the motility of the parts affected had not, however, undergone any change. This patient had, for the last six weeks, experienced almost constant dizziness, and it was nearly since that same period, that he commenced to lose the sensibility in all the portions of the skin previously affected with erysipelas. Was there not, in this case, a specific affection of the fifth pair of nerves?

The perversions of cutaneous sensibility, preceding the apoplectic attack, may develop themselves always in the same point, or seize on different parts one after the other; they may manifest themselves on both sides of the body at once, or confine themselves merely to one, and, in the latter case, the side which they affect will, in general, be that which, at a subsequent period, will become paralysed.

Nothing is more uncertain than the time intervening between the lesion of the sensibility, and the apoplectic attack. In several cases, we have seen the sensibility modified only a few days before the appearance of the symptoms of cerebral hemorrhage: in others numbness, formications of the extremities, manifested themselves some years before the occurrence of the hemorrhage.

Let us now trace the modifications which the cutaneous sensibility may undergo, after the cerebral hemorrhage has appeared.

The abolition of sensibility does not always accompany loss of motion.

When it does take place, it is generally seated in the parts whose power of motion has been modified. We have seen some cases, however, in which it was not so. In a man, for instance, who entered the La Pitié in the year 1831, we made the following observations :

This person, 60 years of age, after having for a long time experienced a pain of the head, seated principally in the right anterior lateral part of the cranium, suddenly lost the faculty of seeing on the same side, where the headache existed ; and, at the same time, the pupil of the right eye was contracted in an extraordinary manner. For about six weeks, the right eye remained thus deprived of sight, without any other phenomenon appearing. But, at the end of this time, the right side of the face lost all sensibility, without its motive powers being in any way changed. From fifteen to twenty days, the sensibility remained thus lost on the right side of the face, then the upper extremity of the left side became evidently weaker than the other, without the cutaneous sensibility in this extremity being changed, and, nearly at the same period, the muscles of the right side of the face began to become paralysed, and the mouth was slightly drawn towards the opposite side. There was not, in this case, the slightest loss of consciousness.

We shall not here discuss what the lesion was, which, in the individual whose case we have just now mentioned, produced this double modification of sensation and motion ; we mentioned the case, merely to point out the extraordinary circumstance of loss of sensation on the right, and of motion on the left. In this case, again, there is another peculiarity—it is this, that the paralysis of motion came on in the left side of the face, that is, in the side opposite that of the paralysed limb. Now this circumstance establishes a striking exception to the law which we previously laid down.

According to the time which elapses from the apoplectic attack, the cutaneous sensibility re-appears, and most usually it is found almost completely re-established, at a time when the paralysis of motion still remains undiminished. However, the fingers often continue benumbed and cold ; but that may depend, in a great measure, on the privation of motion producing a degree of languor in the capillary circulation.

2. *Lesions of the Sensibility of the Mucous Membranes.* In those cases where the sight is lost, the eyelids are made to approximate by touching the conjunctiva with the finger. There are, however, some cases in which this membrane becomes so insensible, that the end of the finger may be passed over the entire anterior surface of the globe of the eye, without the eyelids approximating, or without the patient's evincing the slightest sign of pain, and that at a time when, in other parts, the sensibility is still sufficiently acute. One of our cases furnished us with a very remarkable instance of that kind. This insensibility is similar to that which may be produced in animals by dividing the fifth pair of nerves.

On introducing a feather into each of the nostrils, we ascertained, in some apoplectic patients, a notable diminution of sensation on one of the halves of the mucous membrane of the nasal fossæ. Some have told us that, on introducing their food into each side of the mouth alternately, there was one side in which the contact of the food with the mucous membrane of the mouth was felt much less distinctly than in the other. We particularly ascertained this diminution of sensibility of one of the sides of the mouth, and one of the

nostrils, in an individual, the corresponding side of all whose face was likewise deprived of sensibility, whilst the power of motion remained intact; in no other part was it altered; sight and hearing were also much weaker on this same side than on the opposite side.

These different modifications of sensibility seem to indicate that there are cases where hemorrhage of the cerebral hemispheres, whatever be its seat, exercises an influence on the fifth pair of nerves.

3. *Lesions of the Functions of the Organs of the Senses.* In a considerable number of cases, vision is not modified. When it is disturbed it may be so before the hemorrhage takes place, at the very time when it has occurred, or after its occurrence.

Before the hemorrhage, several persons experience on the part of vision, strange sensations, real hallucinations. With some all objects appear to be coloured red; others fancy that a red line borders all bodies; a sensation similar to what is experienced, when the eyes have been for some time exposed to the impression of a strong light. There are some who cannot look attentively at an object without seeing it dotted with red or black points; others have a constant mist interposed between their sight and the object they are looking at. Some are tormented by the appearance of this which seem to them constantly dancing before their eyes.

It must not however be supposed that these different hallucinations of vision lead necessarily to cerebral hemorrhage. We have had an opportunity of observing a person, who, for several years, was constantly tormented by the imaginary sight of small bodies of different forms and colors dancing before his eyes; if he would look steadily at an object, he saw it dotted with a number of black points; this hallucination which was permanent, prevented his being able to read or write; he had neither dizziness, vertigo, nor headache; the conjunctivæ were habitually red, and he could not endure without considerable suffering a more than ordinary strong light.

Diplopia has been occasionally observed a certain time before the supervention of an attack of apoplexy.

Other persons have been suddenly struck with blindness, and the loss of sight was with them the principal precursor of cerebral hemorrhage. We have seen a locksmith, who after having experienced considerable dizziness of the head for eight days, suddenly lost his sight. After having remained blind for fifteen days, he suddenly fell down deprived of consciousness, and paralysed on the right side; consciousness soon returned; the hemiplegia continued; but, what was very remarkable, some time after the attack, he began to recover his sight, which however continued very weak with him. We saw another individual in whom, during the month preceding the attack, the sight was completely lost three different times; he suddenly became blind; the blindness continued from forty-eight to sixty hours; he recovered his sight.

In a word, individuals have been observed in whom for some time before the attack, their vision acquired unusual sharpness.

Such are the principal phenomena which manifest themselves as connected with sight, a longer or shorter time before the hemorrhage supervenes. Their existence proves indisputably that before the blood is effused, there is already going on in the brain a morbid process, either continued, or inter-

mittent, the nature of which it would be a matter of great importance precisely to determine.

Once the hemorrhage has come on, the sight may remain unaffected; but it may also be lost. Sometimes it is lost on both sides; that takes place in violent apoplexy, when the hemorrhage is very extensive. Sometimes, on the contrary, the power of vision disappears only on one side. But here two different cases have been observed: in the one case the sight is lost on the side where the paralysis of the limbs exists: in the other case the patient does not see with the eye of the side opposite the paralysed side of the body.

We have investigated how far the hemorrhage occupied a particular seat in those cases, where, after its occurrence, the sight continued affected, and this seat we have never been able to discover. We might cite cases here either from our own practice, or which have been recorded by other writers, in which we might find different alterations of vision, though the most different parts of the hemispheres were the seat of the hemorrhage. We do not admit then with M. Serres, that sight is lost only when the hemorrhage has its seat in the optic thalami, on the level of the commissure. We shall see as we go on, that lesions of the cerebellum are also accompanied with different disturbances of vision, and in particular with amaurosis. In the face of so many facts, which show us constantly, in the alterations of the brain, the most different seats, to explain the disturbance of one and the same function, shall we deny that certain parts of the brain are particularly destined for the performance of certain acts? We would have no right to do so; for it is probable that certain points of the brain have such a relation among them, that the lesion of such a one among them will re-act in particular on such another; and this will probably be the secondary alteration of the latter, inappreciable by the scalpel, which is to produce the peculiar functional disturbance.

The sense of hearing may present, before, during, and after the cerebral hemorrhage, the same modifications as the sense of vision. Before the hemorrhage, there are some who are annoyed with buzzing in the ears, continual or intermittent tingling. Several fancy they hear the strangest noises. These hallucinations are however far from being the constant prelude to an attack of apoplexy; they may be connected with mere perversions of sensibility, and have nothing whatever to do with cerebral congestion.

We have no particular observations to make on the modifications produced in the senses of taste and smell by hemorrhage of the cerebral hemispheres.

4. *Lesions of Sensibility seated in the Encephalon itself.*—Pain of head more or less intense, dizziness, vertigo, often precede cerebral hemorrhage. There are some persons, who, for several months, are constantly affected with the signs of cerebral congestion; one day it becomes more violent, and the hemorrhage takes place. We cannot understand how persons can deny such a precursor, and assert, that it takes place only in cases of softening. We acknowledge besides that it is often completely wanting, and that individuals may be suddenly struck with cerebral hemorrhage, without ever having before presented the least symptom as referrible to the brain, without having ever complained either of headach, dizziness, &c.

After the hemorrhage, there is no additional phenomenon observed, we merely see the same symptoms continue in a great number of cases (such as vertigo, etc.) as had been the precursors of the disease.

CHAP. III.—LESIONS OF INTELLIGENCE.

In the same manner as the lesions of motion and sensation, these also must be considered, before the hemorrhage has taken place, and after it has occurred.

Several persons preserve all the clearness and strength of their intelligence, up to the moment when they are struck with apoplexy. In others there are observed, a shorter or longer time before this period, some changes in the intellectual faculties; sometimes they are as it were benumbed; sometimes, on the contrary, they manifest an extraordinary excitement. Some patients lose their memory; there are moments when they know neither where they are, nor what they do, nor what they say. We here give some instances of these aberrations of intelligence, which we have had an opportunity of observing.

A woman, whose reason had been up to that period perfectly sound, gave herself up all at once, without any obvious cause, to violent fits of passion; she became frantic, and was conveyed to the La Charité, in a state resembling mania; on the very evening of her entering the hospital, she was struck with apoplexy, of which she died in less than thirty hours. On opening the body we found in one of the cerebral hemispheres an enormous effusion of blood.

A man, about 50 years of age, forgets his own name; he is from time to time convinced that he is dead; he no longer recognises his own immediate relatives; he remains fifteen days in this state; then he is struck with apoplexy; the post-mortem examination again shows in this case an effusion of blood within the hemispheres; no other lesion was discovered.

Another man becomes incapable of attending to any occupation: he remains constantly seated, and his eyes as it were weighed down with sleep; we could with difficulty elicit from him some few answers: this state terminated by an attack of apoplexy.

Several similar cases have been seen by practitioners; they clearly prove that before the time the hemorrhage takes place, there may be already in the brain a morbid state, which is the precursor of it, and which may manifest itself by divers disturbances of motion, sensation, or intelligence.

Other persons experience, at several different times, sudden losses of consciousness; they fall suddenly into a profound coma, and it is supposed that they are under the influence of cerebral hemorrhage. But this coma soon disappears, and they are restored to perfect health, until a new coup de sang returns. At last a time comes when, instead of a simple congestion by which all these phenomena might be explained, there comes on a real hemorrhage, the effects of which are no longer transient, as those of the congestion which preceded it.

Even at the time the hæmorrhage takes place, three cases may present themselves with respect to the modifications which the intelligence undergoes.

In the first case it is perfectly intact, and the serious alteration which the power of motion then suddenly undergoes, brings no disturbance on the exercise of the intellectual faculties.

In a second case, the intelligence becomes more or less dull, at the same time that the limbs are paralysed. The patients fall into a stupor; others form incoherent resolves, or utter some unintelligible words; however they are still conscious of the external world, and they are still able to hold relation with it.

In a third case, on the contrary, the loss of consciousness is complete. The patients are plunged into a state of coma from which the most energetic excitements cannot arouse them. Only sometimes, after being spoken to with a very loud voice for the purpose of awakening them, they open their eyes slowly, and stare for some seconds on the person who is watching them; but they soon relapse into their lethargic sleep.

These differences in the state of the intelligence at the time the attack of apoplexy takes place, depend principally on the greater or less extent of the effusion. With respect to the seat of the latter, it has not appeared to us to exercise any great influence on the intellectual faculties. Not only have we seen the loss of consciousness coincide with hemorrhage in all possible points of the cerebral hemispheres, but we have even found it in cases where the hemorrhage had its seat outside the hemispheres, in the cerebellum for example, or in the pons varolii. Dr. Fabre has cited the very interesting case of an old man, who died of an attack of apoplexy accompanied with complete loss of consciousness, in whom the nervous centres presented no other lesion than an effusion of blood into the substance of the left anterior pyramid; a very striking example no doubt of the wonderful connexion, which holds together, and brings into unity of action all the parts of the nervous system.

After the effusion of blood has taken place, the coma may remain, the patient does not recover consciousness, and, in this case, death soon arrives. In the most favourable cases, and which are far from being rare, the state of coma disappears; but once the individual has come to himself, the intelligence does not always present the same condition. In a very small number of cases, it is perfectly re-established; most frequently it remains enfeebled—the patient retains sufficient reason to be able to attend to the concerns of common life; but he has become incapable of deep or profound reflection—he can no longer join, without distress, in a conversation of any length, or of a serious nature, and it is necessary to debar him from it, otherwise his state may be made worse.

Instead of this simple weakness, the intelligence may present a more serious alteration. Thus we see a great number of apoplectic patients fall into a real state of childishness, or of senile dotage; they shed tears with extraordinary facility. Others are seized from time to time, with a delirium, which resembles that so often induced by acute inflammation of the meninges, and, in fact, it may be supposed that, in such cases, it is caused by the occurrence of an irritation of the arachnoid which covers the affected hemispheres. Madness, in a word, has been seen to declare itself after a cerebral hemorrhage.

There is a phenomenon observed rather frequently, after an effusion of

blood into the brain, that is, loss of speech. It may exist with a perfect integrity of intelligence. Sometimes this accidental dumbness soon disappears—sometimes the speech is not recovered till after the expiration of a considerable time; sometimes, in a word, it continues for ever lost.

M. Professor Bouillaud published some years since a paper, containing some curious facts, for which he thought he might conclude, that the formation of speech has for its instrument the anterior extremity of each hemisphere, he having found this part the seat of lesion every time that, during life, speech itself had been lost. What our researches on this subject have led us to conclude, is as follows:—

Out of thirty-seven cases observed by ourselves or by others, relative to hemorrhages or other lesions, in which the morbid change in one of the anterior lobes, or in both, speech was abolished twenty-one times, and retained sixteen times.

On the other hand, we have collected fourteen cases, where the speech was abolished without any alteration in the anterior lobes. Of these fourteen cases, seven were connected with diseases of the middle lobes, and seven with diseases of the posterior lobes.

The loss of speech is not, then, the necessary result of the lesion of the anterior lobes; and besides, it may take place in cases where anatomy does not shew any alteration in these lobes. M. Lallemand* has cited a case, in which there was found no other alteration than a softening of the white substance of the left lobe of the cerebellum; in this case, however, to which we shall take occasion to return for another purpose, the faculty of speech was completely lost. In M. Ollivier's work on the spinal cord,† you will find the case of an individual, in whom occurred the phenomenon of loss of speech, at first partial, and then complete: in this case, it was in the pons that the alteration existed; it was found softened at its lower surface, to an extent equal, at least, to the size of a filbert.

CHAP. IV.—LESIONS OF THE FUNCTIONS OF THE ORGANS OF NUTRITIVE LIFE.

Among these functions, there is but one which is specially affected by cerebral hemorrhage; and, again, the latter must be rather considerable, or, which comes to the same thing, it must find the individual so predisposed, that a slight effusion will produce in the brain a greater disturbance than would seem to be compatible with the intensity of the lesion. Then the respiration presents a particular character, which is designated by the term *stertorous*. Must we admit, with M. Serres, that this function is particularly affected, in the case in which the hemorrhage is seated in the optic thalamus and in its radiations?‡

The stertor of the respiration is, in general, a very fatal sign, and individuals who present it in a marked manner seldom escape a speedy death. To

* Letter ii. p. 134.

† Tom. ii. p. 614.

‡ *Anatomie Comparée du Cerveau*, tom. ii.

account for it there is found on the dead body considerable infarction of the lungs, and a great quantity of frothy mucus in the bronchi. It is certainly in consequence of the embarrassment of the respiration, that persons struck with cerebral hemorrhage die, in the case where the attack is severe, and where they die promptly.

The circulation presents various disturbances; the heart frequently beats with strength, but this strength is rather in reference to its preceding state than to the cerebral disease itself. The pulse is variable—it is, however, more frequently slow than otherwise.

The digestive functions present no particular disturbance, except frequently obstinate constipation, which is not always overcome by drastic purgatives. It should be remarked, however, that the absence of alvine evacuations in such cases, as M. Andral observes, is far from indicating an *insensibility* of the mucous membrane to the action of irritating substances, brought in contact with it, inasmuch as a bright red injection has been frequently found on the internal surface of the intestine, arising, no doubt, from the irritation of the purgatives. There is an ambiguity in the term *insensibility*, which might be apt to lead the younger portion of our readers astray. M. Andral obviously alludes to the absence of that species of sensibility called *organic sensibility*. We remember that Lallemand, in his work on Diseases of the Spinal Cord, says that the sensibility of the urinary bladder is diminished—the patient makes no effort to expel the urine, “because he does not *perceive* the impression made by it on the mucous membrane;” here Lallemand evidently means the *animal sensibility*. The same reason for the inflammation of the bladder, in the one instance, will hold good for the inflammation of the intestinal mucous membrane in the other. Another instance, in addition to that alluded to at the commencement of this present article, of the importance of precision and clearness in the use of terms, more particularly in philosophical discussions.

We have now selected, from the volume before us, those parts which have a practical bearing, and which are of daily, nay, hourly application, and, consequently, of primary importance to the practical physician. With respect to that bone of contention, which has set our French neighbours so often at loggerheads with each other, we mean “*ramollissement*” of the brain, some of them maintaining that it is inflammatory in its nature—others, that it is a morbid change, *sui generis*, we regret to say that, in the present state of science, little of practical utility can be said about it. We may, perhaps, return to it at some future period. Regarding the merits of this volume, we can say no more than we said in our last number: we arise from the analysis of it very much gratified, and we shall have no hesitation in saying, very much instructed. It is, in fact, a book which should be carefully studied by every medical practitioner.

THE CONSTITUTION OF MAN, CONSIDERED IN RELATION TO EXTERNAL OBJECTS. Second Edition, corrected and enlarged, 8vo, pp. 458. Edinburgh and London, 1835.

ETIOLOGICAL science will derive great advantages from the principles propounded by Mr. Combe, in this improved edition of his "Constitution of Man." In accordance with the objects of this Journal, however, we resign the purely philosophical portion of these principles, to be studied and applied by moralists, legislators, and theologians; and, perceiving many excellent hygienal precepts, as well as physiological maxims, disseminated over the work, we shall select some of these, and earnestly recommend them to the attention of our medico-chirurgical readers, as a source in which they will find many instructive observations, available for the conservation of health and the prevention of disease.

Mr. Combe inculcates the topics discussed in this volume with the fervour of philanthropical eloquence, and with the solemnity due to investigations instituted for the generous end of distinguishing and purifying the elements of everlasting truth. He opens his work with a section of introductory remarks, intended to exhibit a view of the constitution of human nature,* and its relations to external objects. In this section, he endeavours to substantiate and apply a doctrine, which he regards as the key to the true theory of the divine government of the world—namely *the independent existence and operation of the natural laws of creation*. He divides the natural laws into three great classes—PHYSICAL, ORGANIC, and MORAL; and the peculiarity of his doctrine is, that these laws operate independently of each other; that each of them requires obedience to itself; that each, in its own specific way, rewards obedience and punishes disobedience, and that human beings are happy, in proportion to the extent in which they place themselves in accordance with all of these divine institutions. As an illustration of Mr. C.'s philosophy, we make an extract from his 26th page. There he remarks—

"The organic laws operate independently; and, hence, one individual who has inherited a fine bodily constitution from his parents, and observes the rules of temperance and exercise, will enjoy robust health, although he may cheat, lie, blaspheme, and murder his fellow-creature; while another, if he have inherited a feeble constitution, and disregards the rules of temperance and exercise, will suffer pain and sickness, although he may be a paragon of every Christian virtue. These results frequently occur in the world; and, on every such occasion, the darkness and inscrutable perplexity of the ways of Providence are generally moralized upon, or a future life is called in as the scene in which these crooked paths are to be made straight. But, if my views be correct, the divine wisdom and goodness are abundantly conspicuous in these events, for we perceive that, by this distinct operation of the organic and moral laws, order is preserved in creation, and the means of discipline and improvement are afforded to all the human faculties.

Mr. C. next enters upon an explanation of the natural laws. According to him, every natural object has received a definite constitution, in virtue of which it acts in a particular way; there must, therefore, be as many natural laws as there are distinct modes of action, of substances, and beings viewed by themselves. But, he adds, substances and beings stand in certain relations to each

* Mr. Combe published the first edition of his "Constitution of Man" in the year preceding the late Earl of Bridgewater's decease, and five years before the first of the "Bridgewater Treatises" made its appearance.

other, and modify each other's action in an established and definite manner, according to that relationship; wherefore, he concludes, there must be also as many laws of nature as there are relations between different substances and beings. He reckons it impossible, in the present state of knowledge, to elucidate all these laws; countless years may elapse before they shall be discovered. Under this conviction, he limits his enquiry to the physical laws, the organic laws, and the laws which characterize intelligent beings. The physical laws embrace all the phenomena of mere matter; he illustrates their operations by instances of chemical action, and the agency of gravitation. Organized substances and beings have properties peculiar to themselves—they act, and are acted upon, in conformity with their constitution, and are subject to the organic laws; their distinguishing characteristic is, that the individuals derive their existence from other organized beings, are nourished by food, and go through a regular process of growth and decay; they are classed into the two great subdivisions of animals and vegetables—the former constitute the subject of Mr. C.'s present observations. Intelligent beings embrace all animals that have distinct consciousness, from the lowest of the inferior creatures up to man—they are divided into two classes, the intelligent and animal, and the intelligent and moral creatures; the dog, horse, and elephant belong to the first class, because they possess some degree of intelligence and certain animal propensities, but no moral feelings—man belongs to the second, because he possesses all the three. The mental faculties have received a precise constitution—have been placed in fixed and definite relations to external objects, and act regularly; Mr. C., therefore, speaks of their acting according to determinate modes or rules, and these he calls the moral and intellectual laws; and, in considering the natural laws generally, he directs attention to four important principles: that these laws are independent of each other—that obedience to each of them is attended with its own reward, and disobedience with its own punishment—that they are universal, unbending, and invariable in their operation—and that they are in harmony with the constitution of man. We must resist the temptation to particularize the facts and arguments by which these positions are substantiated. Whoever studies them with candour will ensure a high reward.

His method leading him next to investigate the constitution of man, and the natural laws to which he is subjected, and to endeavour to discover how far the external world is arranged with wisdom and benevolence, in regard to the human race, Mr. C. divides this part of his inquiry into five separate sections. In these, he considers man as a physical being*—as an organized being—as an animal, moral, and intellectual being. He then compares the faculties of man with each other, and evinces the supremacy of the moral sentiments and the intellect over the animal propensities; and, last of all, he institutes a comparison between the human faculties and the external objects of creation. The next part of his inquiry is on the sources of human happiness, and the conditions requisite for maintaining it. He states, p. 98—

“The *first* and most obvious circumstance which attracts attention is, that all enjoyment must necessarily arise from *activity* of the various systems of which the human constitution is composed. The bones, muscles, nerves, digestive and

* Many valuable illustrations of the natural laws may be studied in the “Principles of Physiology, applied to the Preservation of Health, and to the Improvement of Physical and Mental Education,” 8vo. Edinburgh and London, 1835—third edition. We would advise all medical students and practitioners to make this instructive volume the subject of careful and frequent perusal; it abounds with useful observations, physiological and philosophical, the result of its author's extensive experience and intense reflection.

respiratory organs, furnish pleasing sensations directly or indirectly, when exercised in conformity with their nature; and the external senses and internal faculties when excited, supply the whole remaining perceptions and emotions, which, when combined, constitute life and rational existence. If these were habitually buried in sleep, or constitutionally inactive, life, to all the purposes of enjoyment, might as well be extinct; existence would be reduced to mere vegetation without consciousness.”—“In the *second* place (p. 110), to reap enjoyment in the *greatest quantity*, and to maintain it *most permanently*, the faculties must be gratified *harmoniously*: in other words, if, among the various powers, the *supremacy* belongs to the moral sentiments, then the aim of our habitual conduct must be the attainment of objects suited to gratify them. For example, in pursuing wealth or fame, as the leading object of existence, full gratification is not afforded to the sentiments of benevolence, veneration, and conscientiousness, and, consequently, complete satisfaction cannot be enjoyed; whereas, by seeking knowledge, and dedicating life to the welfare of mankind and obedience to God, in our several vocations, these sentiments will be gratified, and wealth, fame, health, and other advantages will flow in their train, so that the whole mind will rejoice, and its delight will remain permanent. *Thirdly*, to place human happiness on a secure basis, the laws of eternal creation themselves must accord with the dictates of the moral sentiments, and intellect must be fitted to discover the nature and relations of both, and to direct the conduct in harmony with them.”

Mr. C. in the next place, proceeds to make an application of the natural laws to the practical arrangements of life: and, at p. 113, he observes:—If a system of living and occupation were to be framed for human beings, founded on the exposition of their nature now given, it would be something like this—1st, So many hours a day should be dedicated, by every individual in health, to the exercise of his nervous and muscular systems in labour, calculated to give scope to their functions: the reward of obeying this requisite of man's nature would be health, and joyous animal existence—the punishment of its neglect is disease, low spirits, and death. 2d, So many hours a day should be spent in the sedulous employment of the knowing and reflecting faculties—in studying the qualities of external objects and their relations, also the nature of animated beings and their relations, not with the view of accumulating mere abstract and barren knowledge, but of enjoying the positive pleasure of mental activity, and of turning every discovery to account, as a means of increasing happiness and alleviating misery. 3d, So many hours a day should be devoted to the cultivation and gratification of our moral and religious sentiments, that is to say, in exercising these in harmony with intellect, and especially in acquiring the habit of admiring, loving, and yielding obedience to the Creator and his institutions; intellect is barren of practical fruit, however rich it may be in knowledge, until it is fired and prompted to act, by moral sentiment; it ought, besides, to be regularly exercised in arts, science, philosophy, and observation. 4th, A certain portion of time should be employed in taking food, in sleep, and in innocent amusement. At p. 121, we find the following observations.

“The grand sources of human suffering, at present, arise from bodily disease and mental anxiety, and these may be traced to infringement, through ignorance or otherwise, of physical, organic, moral, or intellectual laws, which, when expounded, appear in themselves calculated to promote the happiness of the race. It may be supposed that, according to this view, as knowledge accumulates, enjoyment will decrease; but ample provision has been made against this event, by withholding intuition from each generation as it appears on the stage. Each successive age must acquire knowledge for itself; and, provided ideas are new to us, and suited to the faculties, the pleasure of acquiring them from instructors, is only second to that of discovering them for ourselves; and, probably,

countless ages may elapse before *all* the facts and relations of Nature shall have been explored, and the possibility of discovery exhausted; if the universe be infinite, knowledge can never be complete."

We have now arrived at a stage of Mr. Combe's investigation to which we would particularly direct the attention of physicians and physiological inquirers. Here he proposes to consider some of the evils which have afflicted the human race, and to ascertain whether these have proceeded from abuses of institutions, benevolent and wise in themselves, and calculated, when observed, to promote the happiness of man, or from a constitution of nature so defective that we cannot supply its imperfections, or so vicious that we can neither rectify nor improve its qualities. He subdivides this branch of his inquiry into three sections—on the calamities arising from infringement of the physical laws—on the evils that befall mankind from infringement of the organic laws—and on the calamities occasioned by infringement of the moral laws—we confine our observations and extracts to the second of these sections, on account of its unfolding principles adapted to promote the extension of medical knowledge and usefulness.

An organized being is one which derives its existence from a previously existing organized being, that subsists on food, grows, attains maturity, decays, and dies. Whatever the ultimate object of the Creator, in constituting organized beings, may be, it will scarcely be denied, says Mr. C. that part of his design is, that they should enjoy their existence; and, if so, the object of every particular part of their structure ought to be found to conduce to this end. The *first* law, then, that must be obeyed, to render an organized being perfect in its kind, is, that the germ from which it springs shall be complete in all its parts, and sound in its whole constitution: the *second* is, that the moment it is ushered into life, and as long as it continues to live, it shall be supplied with food, light, air, and every physical aliment necessary for its support: and the *third* law is, that it shall duly exercise its functions. Where all these laws are obeyed, the being should enjoy pleasure from its organized frame, if its Creator is benevolent: and its constitution should be so adapted to its circumstances, as to admit of obedience to these laws, if its Creator is wise and powerful. Is there, then, no such phenomenon on earth, as a human being existing in full possession of organic vigour, from birth till advanced age, when the organized system is fairly worn out? Numberless examples of this kind have occurred, and they show to demonstration, that the corporeal frame of man is so constituted as to admit the *possibility* of his enjoying organic health and vigour during the whole period of a long life; and Mr. C. concludes, since a natural law never admits of an exception, this excellent health would not occur in any individuals unless it were fairly within the capabilities of the race. Holding this doctrine as established, he proceeds to inquire into the causes why these advantages are not universal. He begins, at p. 138, with repeating—

"That the germ of the infant being must be complete in all its parts, and perfectly sound in its condition, as an indispensable requisite to its vigorous developement and full enjoyment of existence. If the corn that is sown be weak, wasted, and damaged, the plants that spring from it will be feeble, and liable to speedy decay. The same law holds in the animal kingdom; and, I would ask, has it hitherto been observed by man? It is notorious that it has not: indeed, its existence has been altogether unknown, or in a very high degree disregarded by human beings. The feeble, the sickly, the exhausted with age, and the incompletely developed, through extreme youth, marry, and without the least compunction regarding the organization which they shall transmit to their offspring, send into the world miserable beings, the very rudiments of whose existence are tainted with disease. If we trace such conduct to its source, we shall find it to originate either in animal propensity, or in intellectual ignorance, or more frequently in both. The inspiring motives are generally mere sensual

appetite, avarice or ambition, operating in the absence of all just conceptions of the impending evils. The punishment of this offence is debility and pain, transmitted to the children, and reflected back in anxiety and sorrow on the parents. Still the great point to be kept in view is, that these miseries are not legitimate consequences of *observance* of the organic laws, but the direct chastisement of their infringement. These laws are unbending, and admit of no exception; they must be fulfilled, or the penalties of dissolution will follow. From observation, I am convinced that the union of certain temperaments and combinations of mental organs, in the parents, are highly conducive to health, talent, and morality, in the offspring, and *vice versa*; and, that these conditions may be discovered and taught with far greater certainty, facility, and advantage, than is generally imagined. It will be time enough to conclude that men are naturally incapable of obedience to the organic laws, when, after their intellectual faculties and moral sentiments have been trained to observance of the Creator's institutions, as at once their duty, their interest, and a grand source of their enjoyment, they shall be found to continue to rebel. The *second* requires nutriment to be supplied in due quantity and of a suitable kind, with free air, light, cleanliness, and attention to every physical arrangement by which the functions of the body may be favoured or impaired. Have mankind obeyed or neglected this institution? I need scarcely answer the question. To be able to obey institutions, we must first know them: before we can know the organic constitution of our body, we must study that constitution, and the study of the human constitution is anatomy and physiology: before we can become acquainted with its relations to external objects, we must learn the existence and qualities of these objects, as unfolded by chemistry, natural history, and natural philosophy, and compare them with the constitution of the body. When we have fulfilled these conditions, we shall be better able to discover the laws which the Creator has instituted in regard to our organic system. That all our functions shall be duly exercised, is the *third* organic law: has this law been properly observed by mankind? Many persons are able, from experience, to attest the severity of the punishment that follows from neglecting to exercise the nervous and muscular systems, in the lassitude, indigestion, irritability, debility, and general uneasiness that attend a sedentary and inactive life."

The brain is the fountain of nervous energy to the whole body; and, it is Mr. C.'s opinion, that many persons are habitual invalids, without actually labouring under any ordinary recognized disease, solely from defective or irregular exercise of the nervous system. In such cases, not only the mind, in its feelings and intellectual capacities, suffers debility, but all the functions of the body participate in its languor, because all of them receive a diminished and vitiated supply of the nervous stimulus, a due share of which is essential to their healthy action. The mode of increasing the strength and energy of any organ and function, is to exercise them regularly and judiciously according to the laws of their constitution. The brain is the organ of the mind; different parts of it manifest distinct faculties; and the power of manifestation in regard to each is proportionate, *ceteris paribus*, to the size and activity of the organ. The brain partakes of the general qualities of the organised system, and is strengthened by the same means as the other organs. When the muscles are called into vivacious activity, an increased influx of blood and nervous stimulus takes place in them, and their vessels and fibres become at once larger, firmer, and more susceptible of action. Thought and feeling are to the brain what bodily exercise is to the muscles; they put it in motion, and cause increased action in its blood-vessels, and an augmented elaboration of nervous energy. Mr. C. illustrates this position by the case of a female, in whom a part of the skull had been removed. Her brain was motionless and lying within the cranium, when she was in a dreamless sleep: it was in motion and protruding without the skull.

when she was agitated by dreams. It protruded more in dreams reported by herself to be vivid, and still more so when she was perfectly awake, and especially if engaged in action, thought, or sprightly conversation. Nearly twenty years ago, we had frequent opportunities of witnessing similar phenomena in a robust young man, who lost a considerable portion of his skull by an accident which had almost proved mortal. When excited by pain, fear, or anger, his brain protruded greatly, so as sometimes to disturb the dressings, which were necessarily applied loosely, and it throbbed tumultuously in accordance with the arterial pulsations.

Those parts of the brain which manifest the feelings constitute by far the largest portions of it, and they are best exercised by discharging the active duties of life and religion: the parts which manifest the intellect are smaller, and are exercised by the application of the understanding in practical business in the arts, sciences, or literature. The *first* step, therefore, towards establishing the regular exercise of the brain, is to educate and train the mental faculties in youth; and the *second* is, to place the individual habitually in circumstances demanding the fulfilment of useful and important duties. Different modifications of the nervous energy elaborated by the brain, appear to take place according to the mode in which the faculties and their organs are affected. Thus, when misfortune and disgrace impend over us, some of the cerebral organs are painfully excited, and transmit an impaired, or positively noxious, nervous influence to the heart, stomach, intestines, and thence to the rest of the body: digestion is then deranged, the pulse becomes feeble and irregular, and the whole corporeal system wastes. On the other hand, when the cerebral organs are agreeably affected, a benign and vivifying nervous influence pervades the frame, and all the functions of the body are performed with increased pleasure and success. It is a law, that the quantum of nervous energy increases with the number of cerebral organs roused to activity; and history, as well as experience, abounds with confirmations of this doctrine. The more elevated the objects of our study, the higher are the mental organs which are exercised; and the higher the organs, the more pure and intense is the pleasure: hence, a vivacious and regularly-supported excitement of the moral sentiments and intellect, is, by the organic law, highly conducive to health and organic vigour. In the fact of a living animal being able to retain life in an oven that will bake dead flesh, we see an illustration of the organic law arising above the purely physical; and, in the circumstance of the moral and intellectual organs transmitting the most favourable nervous influence to the whole bodily system, we have an example of the moral and intellectual law rising higher than the merely organic. Mr. Combe elucidates the foregoing principles, which are of great practical importance, by a few actual cases. We give some of these in the following extract:—

“Two or three centuries ago, various cities in Europe were depopulated by the plague; and, in particular, London was visited by an awful mortality from this cause. The people of that age attributed this scourge to the inscrutable decrees of Providence, and some to the magnitude of the nation's moral iniquities: but, according to the views now presented, it must have arisen from infringement of the *organic laws*, and been intended to enforce stricter obedience to them in future. Its causes and objects, when clearly analyzed, appear to have had no *direct* reference to the moral condition of the people. The facts recorded in history exactly correspond with the theory here propounded. In the fifteenth century, the floors of the houses being commonly of clay, and strewn with rushes or straw, it is loathsome to think of the filth collected in the hovels of the common people, and sometimes in the lodgings even of the superior ranks, from spoiled milk, beer, grease, fragments of bread, flesh, bones, spittle, excrements of cats, dogs, and other animals. From similar causes arose the plague and sweating-sickness of London, which, in this respect, re-

sembled Paris and other towns of any magnitude, in those times. The streets of the former metropolis were excessively narrow, the habits of the people dirty, and no adequate provision was made for removing the filth unavoidably produced by a dense population. The great fire in that city, which happened soon after the pestilence, afforded an opportunity of remedying, in some degree, the narrowness of the streets; habits of increasing cleanliness abated the filth; and these changes brought the people into a closer obedience to the organic laws, and no plague has since returned."—Obviously, therefore, if Mr. Combe's theory be the right one, obedience to the natural laws will prove a better security from "plague, pestilence, and famine," than all the expedients of quarantine and political economy which have hitherto been invented.

Having traced bodily suffering in individuals to neglect of, or opposition to, the organic laws, Mr. C. next adverts to another set of calamities, which may be called social miseries, and obviously spring from the same causes. This leads him to expatiate on the transmission of hereditary qualities, on neglect of the organic laws in marriage, on the choice of servants, and on death, which he represents as a natural institution, alike wise and benevolent. For an exhibition of the facts and inductions on which this doctrine is founded, we must refer our readers to the 217—235 pages of his volume, where they will find that Mr. C.'s views on this, as on every other subject, are explained with singular perspicuity and comprehensiveness, with an earnestness and candour unusually persuasive.

With much reluctance we pass Mr. C.'s truly interesting observations on the calamities arising from infringement of the moral law; on punishment as inflicted under the natural laws, and its moral advantages; on the combined operation of the natural laws, and their influence on the happiness of individuals; and on the relation between science and the Sacred Writings. Our limits reduce us to this necessity: we will, therefore, bring this article to a conclusion with some extracts and reasonings of his on the "transmission of hereditary tendencies," giving preference to this theme because of its relation to physiological knowledge.

Physiologists are agreed, that a vigorous and healthy state of body in the parents communicates existence in the most perfect state to their offspring, and *vice versâ*; and many observers of mankind, as well as medical authors, have remarked the transmission, by hereditary descent, of mental talents and dispositions. These positions are adopted by Mr. Combe, and he confirms them with the authority of reputable writers as well as with his own extensive and diversified experience. Mental talents and dispositions are determined by the size and constitution of the brain, which is a portion of man's organized system; and, as such, it is subject to the organic laws, by one of which its qualities are transmitted by hereditary descent. This law, however faint and obscure it may appear in individual cases, becomes absolutely undeniable in nations. When we place a collection of Hindoo, Carib, Negro, New Holland, North America, and European skulls in juxta-position, we perceive a national form and combination of organs in each, actually obtruding itself upon our notice, and corresponding with the mental characters of the respective tribes: the cerebral development of one tribe is seen to differ as widely from that of another, as the European mind does from that of the New Hollander. Here, then, each Hindoo, Chinese, Negro, and Carib, obviously inherits from his parents a certain general type of head; and so does each European. If, therefore, the general forms and proportions are thus so palpably transmitted, can we doubt that the individual varieties follow the same rule, modified slightly by causes peculiar to the parents of the individual? The differences of national *character* are equally conspicuous as those of national *brains*, and it is surprising how permanently both endure. Now, if form, size, and constitution of brain, are thus transmitted from parents to children; if these cerebral conditions determine natural mental talents and dispositions, which in their turn exercise the greatest influence over the happi-

ness of individuals through the whole of life; it becomes extremely important to discover the laws according to which this transmission takes place. At the first aspect of the question, three principles present themselves to our consideration. Either, in the *first* place, the constitution and qualities of brain, which the parents themselves inherited at birth, are transmitted absolutely, so that the children, sex following sex, are exact copies, without variation or modification, of the one parent or the other; or, *secondly*, the natural and inherent qualities of the father and mother combine, and are transmitted in a modified form to the offspring; or, *thirdly*, the qualities of the children are determined jointly by the constitution of the stock, and by the faculties which predominate in power and activity in the parents, at the particular time when the organic existence of each child commences. Experience shews that the *first* cannot be the law; for, a real law of nature admits of no exceptions, and it is a well-established fact, that the minds of children are not exact copies, without variation or modification, of those of the parents, sex following sex. Neither can the *second* be the law, because it is equally certain that the minds of children, although *sometimes*, are *not always*, in talents and dispositions exact blended reproductions of those of the father and mother. If this law prevailed, no child would be a copy of the father, none a copy of the mother, nor of any collateral relation, but each would be invariably a compound of the two parents, and all the children would be exactly alike, sex alone excepted. Experience shews that this is not the law: what, then, does experience say to the *third* idea, that the mental character of each child is determined by the particular qualities of the stock, combined with those which predominated in the parents when its existence commenced.

Having previously adverted to the influence of the stock, Mr. C. here (p. 182) illustrates that of the condition of the parents, when existence is communicated. One striking and undeniable proof of the effect on the character and dispositions of children, produced by the form of brain transmitted to them by hereditary descent, is to be found in the progeny of marriages betwixt Europeans, whose brains possess a favourable developement of the moral and intellectual organs, and Hindoos and Native Americans, whose brains are inferior. All authors agree, and report the circumstance as singularly striking, that the children of such unions are decidedly superior in mental qualities to the native, while they are still inferior to their European parent. So much is this the case in Hindostan, that several writers have already pointed to the mixed race there, as obviously destined to become the future sovereigns of India. These individuals inherit from the native parent a certain adaptation to the climate, and, from the European parent, a higher developement of brain—the two combined constituting their superiority. Another illustration of the same law is found in the fact, that when two persons marry very young, the eldest of their children inherits a less favourable developement of the moral and intellectual organs, than those produced in more mature age. Generally, in men, the animal organs are most vigorous in early life, and this energy appears to cause them to be then most readily transmitted to offspring. Indeed, says Mr. C. it is difficult to account for the wide varieties in the form of the brain, in children of the same family, unless on the principle, that the organs which predominate in vigour and activity in the parents, at the time when existence is communicated, determine the tendency of corresponding organs to develop themselves largely in the children.

Now, if this be really the law of nature, then parents, in whom the animal propensities are habitually active, will transmit the organs of these propensities in a state of high developement and excitement to their children: and, in those in whom the moral and intellectual organs exist in supreme vigour, will transmit these in greatest perfection. This view is in harmony with the fact, that children generally, though not universally, resemble their parents in their mental qualities; because, the largest organs being naturally the most active, the general and habitual state of the parents will be determined by those which pre-

dominate in size in their own brains; and, on the principle that predominance in activity and energy causes the transmission of similar qualities to the offspring, the children will, in this way, very generally resemble the parents. But they will not always do so; because even very inferior characters, in whom the moral and intellectual organs are deficient, may be occasionally exposed to external influences, which, for the time, may excite these organs to unwonted vivacity, and, according to the rule now explained, a child, dating its existence from that period, may inherit a higher constitution of mind, and a co-existent higher organization of brain, than the parents. Or a person with an excellent moral developement may, by some particular occurrence, have his animal propensities roused to unwonted vigour, and his moral sentiments thrown, for the time, into the shade; and any offspring connected with this condition would prove inferior to himself in the developement of the moral organs, and greatly surpass him in the size of those of the propensities. Mr. C. does not present these views as ascertained science, but as inferences, strongly supported by facts, and consistent with known phenomena: if we believe them to be true, they will powerfully strengthen the motives for preserving the *habitual supremacy* of the moral sentiments and intellect, when, by so doing, improved moral and intellectual capacities may be conferred on offspring. In fine, since activity in the faculties is the fountain of enjoyment, the whole constitution of nature is designedly framed to support them in ceaseless action. What scope, then, for observation, reflection, the exercise of moral sentiments, and the regulation of animal impulse, does not this picture of nature present!

Mr. Combe believes that his essay contains views of the constitution, condition, and prospects of man, which deserve attention; but, with characteristic modesty, he lays no claim to originality of conception, stating that the only novelty in his pages, respects the relations which substantiated truths hold to each other. Physical laws of nature, he remarks, affecting our physical condition, as well as regulating the whole material system of the universe, are universally acknowledged, and form the elements of natural philosophy and chemical science. Physiologists and medical practitioners, admit the existence of *organic* laws; and the sciences of government, legislation, education, indeed our whole train of conduct through life, proceed upon the admission of laws in morals. Accordingly, the laws of Nature have formed an interesting subject of inquiry to philosophers of all ages; but no author has hitherto attempted to point out, in a combined and systematic shape, the relations between these laws and the constitution of man—nor has any preceding writer unfolded the independent operation of the several natural laws, and the practical consequences which follow from this fact: nevertheless, all this must be done before our knowledge of them can be beneficially applied. The great object of Mr. C.'s book is to exhibit these relations and results, with a view to the improvement of education, and the regulation of individual and national conduct; and, with some right to entertain an opinion on such questions, we feel justified in stating, with perfect sincerity, that his essay has been crowned with extraordinary success.

Having considered man as a *physical* being, and adverted to the adaptation of his constitution to the physical laws of creation—having viewed him as an *organized* being, and traced the relations of his organic structure to his external circumstances—having taken a survey of his *faculties* as an animal, moral, and intellectual being, with their uses, and the forms of their abuses—having contrasted these faculties with each other, and discovered the supremacy of the moral sentiments and intellect; and having compared his faculties with *external objects*, in order to ascertain what provision has been made by the Creator for their gratification—having accomplished these arduous and important ends, it is manifest that Mr. Combe must have investigated, and, as we think, clearly established, many elementary doctrines, possessing an absolute and constitutive

bearing upon the foundations of those sciences, whereof medicine is the aggregate. Heretofore, this has been essentially crippled in its advances, by the oversight of neglecting to make the acquisition of mathematical, metaphysical, and ethical knowledge, an integral and indispensable requisite in completing the evidences of qualification, to recognize the actual characters of disease, and to discriminate the therapeutical agents by which they can be removed. Whoever, therefore, encourages a desire to win distinction as an intelligent physician, should zealously cultivate his knowing and judging faculties; and, with a view to promote his meritorious exertions, we would solicit him to study, particularly and perfectly, Mr. C.'s excellent "*Constitution of Man*."

A TREATISE ON HEADACHES, THEIR VARIOUS CAUSES, PREVENTION, AND CURE. By *George Hume Weatherhead, M.D.* &c. &c.

AFTER the laborious and erudite volume of the late Dr. Vaughan, of Rochester, on the subject of headaches, we did not expect to find much novel matter in this small duodecimo of Dr. Weatherhead's, though we were quite aware of the talent for observation possessed by the author. We were agreeably disappointed—and the cause may, very probably, be ascribed to the circumstance of the author being himself a sufferer from the complaint. None can describe a disease so well as he who has felt it, *ceteris paribus*. Hence we have had some excellent monographs from the pens of physicians, who delineated from their own sufferings.

Dr. W. has prefixed to the more practical part of his subject, a very well-written chapter on the physiology of the brain. On this we need not dwell. But we are tempted to make an extract from this chapter, respecting the difference between reason and instinct—and the cause of that difference.

"All former physiologists and psychologists have failed in their attempts to bring the instinctive faculties under those proper to the brain. The wonderful works of bees and spiders would suppose a degree of intelligence greater than even the higher and more docile classes of the vertebrated animals ever attain to, superior even to what man, as an isolated being, could evince, were he to try to execute any thing so geometrically perfect.

Thus naturally led to the reflection, let us now observe the contradiction which such a train of ideas involves. It is an accorded fact, that the insect tribe are infinitely below the humblest of the vertebrated animals in relation to the size of the brain; and yet, if their instincts are acts of this organ, how comes it that many of them should be so superior in this respect to most of the vertebrated animals? Comparative anatomy solves the question—they are acts which the brain does not execute. From the foregoing observations, therefore, we are enabled to infer, that man ranks in the lowest grade as an instinctive being, because he is the most inferior of all relatively to the proportional volume of the fifth pair of nerves compared with the brain. The bee, again, may be placed at the head of the invertebrated animals for its instinctive faculties, because its cranial ganglions are the most developed.

If it were necessary to adduce proof of the exceeding value of physiological knowledge, in elucidating what hitherto has afforded to the materialist and seep-

tic a tenable position for argumentation, founded on the mental manifestations of the brute creation, and what has no less evaded the researches and speculations of the profoundest metaphysicians satisfactorily to explain,—no more cogent or conclusive example could be given, than the manner in which the investigations of comparative anatomy have demonstrated the difference of the organs of instinct and of mind." 18.

Headache is, of course, only a symptom of some disease, and, consequently, is always symptomatic—never idiopathic. The following is the order in which our author proposes to treat of this class of complaints.

"I. DYSPEPTIC, OR SICK HEADACHE.

II. NERVOUS HEADACHE.

III. HEADACHE FROM FULNESS OF BLOOD IN THE HEAD; originating from

VENOUS PLETHORA.

ARTERIAL PLETHORA.

IV. RHEUMATIC HEADACHE.

V. ARTHRITIC HEADACHE.

VI. HEADACHE FROM ORGANIC LESION OF THE BRAIN." 20.

The first variety is not the most common form, though it is generally considered so both by patient and practitioner. The doctrines of Abernethy and Philip have led people to refer almost every complaint of the body to disorder of the digestive organs. There can be no doubt that these organs are very frequently affected, either primarily or secondarily, in a great number of maladies; but as a certain personage is not so black as he is painted, so the stomach and liver are often blamed, when they are more sinned against than sinning.

The dyspeptic or sick headache, however, is described with great truth and clearness by Dr. Weatherhead—more faithfully, indeed, than by any author that we are acquainted with.

"It is usually ushered in by a sensation of chilliness passing over the frame, and a feeling of fatigue and lassitude pervading the whole muscular system. While the feet are cold, the countenance is often flushed and tumid, and the forehead burning hot. A pain, varying in character, is felt most usually over the forehead, or in one or other of the temples. At times, this pain is dull and heavy, attended with much heat, and a sense of weight and fulness, as if the bloodvessels were over-gorged, which, indeed, is the fact; the temporal arteries beat with violence, imparting a throbbing character to the pain, aggravating it by each pulsation, while all the veins about the head (most observable on the forehead) are swollen and distended. There is a total prostration of appetite, and sickness is felt at stomach; the pulse is quickened, often full; the tongue coated with a brown fur; an acrid sensation is felt in the back part of the throat, particularly after eructations; the mouth is clammy; the saliva viscid; the breath offensive: the skin is dry and parched; the urine is usually limpid and abundant; the palms of the hands are burning hot; and in many cases the feet are icy cold.

During the continuance of the pain, the patient is incapable of applying his attention to any thing; his thoughts are distracted and confused, and his recollection greatly impaired. Indeed, the common effect of habitual headachs is to injure the energy of the intellect, and especially the memory.

The pain, if seated in the temple, will not unfrequently shift into the eye-ball of the same side, or it will fix itself over the inner corner of the eye-brow, affecting, in fact, the supra-orbital branch of the fifth pair of nerves, as it emerges from the orbit to spread its ramifications on the brow. This particular kind of

headach is, by the general consent of medical writers, attributed to gastro-intestinal irritation, proceeding from acrid acidity in the stomach and duodenum; and no headach is more excruciating: the sufferer seeks quietude and silence, being distracted by company;—the least noise aggravates the pain, and light is painful and oppressive to the eyes, contracting the pupil.*

With the above symptoms there is usually conjoined much sickness at stomach, which is sure to be increased by erect posture, or by moving about. At length retching comes on, and speedily terminates in vomiting, attended with violent strainings. The matter usually first ejected consists of the contents of the stomach in an undigested, or corruptly digested state, mixed, for the most part, with much acrid acidity; sometimes, indeed, the matter brought up consists of nothing else; but if the retching and straining continue, bile is at length ejected—a result not always to be attributed to any undue quantity in the secretion itself, but rather to the pressure which is made by the muscles, in the action of vomiting, on the gall-bladder, emptying it of its contents, and forcing it into the stomach. We thus see that the familiar appellation of 'bilious' as applied to headachs is often used incorrectly, the presence of bile being entirely incidental; in many instances, the *effect* of severe straining, and not the *cause* of the headach." 23.

The stomach being freed from its contents, and all the emunctories having been opened, the pain usually abates—sleep often succeeds—and the patient generally awakes free from headache.

Dr. W. thinks that these headaches are sometimes occasioned by atmospheric influence, since they occur where there has been no "irregularity or imprudence over-night." But we can assure Dr. W. that irregularities in diet are by no means necessary to induce indigestion. Passions of the mind will disorder the stomach far more effectually than wrong food—hence the great number of dyspeptics who observe the most exact regimen. We are rather surprised that Dr. W. has excluded, or at least omitted, moral causes of sick headache from his etiological catalogue. The common or material causes he has correctly enumerated, and we need not repeat them. The treatment he defers, till the second variety—the nervous headache, is under consideration. The temperament which disposes to this species, both in males and females, is indicated by variable spirits—fickleness of temper—and excessive susceptibility to all impressions, moral and physical.

"The mind and body reciprocally act upon each other in all constitutions, but they are more especially sympathetic in the nervous; and as physical agents, acting through the corporeal sensibility affect the mind, so mental emotions and impressions no less powerfully operate upon the nervous system." 29.

Atmospheric influence, Dr. W. thinks, is one great physical cause of this kind of headache.

"It not unfrequently happens that a nervous headache, which has continued severe through the day, goes off in the evening. This is sometimes attributable to a change in the state of the atmosphere itself; but is, perhaps, frequently better accounted for by ascribing it to that *periodical augmentation which takes place in the energy of the brain and nervous system generally, recurring every even-*

* "Meckel explains this last symptom by the conjunction of the first branch of the fifth and the third nerve with the ophthalmic ganglion, from which the ciliary nerves proceed."

ing. It is this diurnal revolution which relieves the symptoms, for a time, of all adynamic diseases, and which so regularly aggravates those of an opposite character; imparting an excitement which dissipates, while it lasts, the gloomy visions of the hypochondriacal, and which produces the vesper exacerbations and delirium in fevers." 35.

We confess that the foregoing explanation appears to us very questionable—and we have no doubt that it will give foundation to a long "critical disquisition," in the new aspirant for critical fame about to appear above the horizon. For our own parts, we shall merely enter our dissent against the doctrine of *augmentation of energy in the brain towards evening*. We suspect that it is just the reverse—and that if Dr. W. tries the experiment, he will find his own brain more energetic in the morning, after a good night's rest, than in the evening, when the whole corporeal and mental powers stand in need of recruit. We are aware, indeed, that many people invert the order of nature, and, by sitting up till 2 or 3 o'clock in the morning, under the influence of artificial excitement, they induce languor and low spirits all the forenoon of the next day—not rallying till after dinner and tea in the evening. But this is a violence done to nature, and, indeed, it is the usual course which ultimately leads to nervous and hypochondriacal complaints.

The various forms of hysterical headache come under this class—the most remarkable of which is the *clavus hystericus*.

"A tendency to headach not uncommonly originates in some latent source of irritation, which, by the sympathy of the nerves, is transmitted to the head. One of the most usual seats of this irritation is the alimentary canal; and there are three principal sources of it; *firstly*, acrid secretions working on the sensibility of the inner membrane of the intestines; *secondly*, accumulation of indurated fæces from habitual constipation; and *lastly*, worms. The last is more especially to be suspected as the cause of headach when it happens and frequently recurs in children. Worms act on the head in a manner analogous to acrid sordes in the first passages, that is, by sympathetic irritation; and when the worm is a tenia, the disease is often accompanied with convulsions. Hoffman (tom. iii. p. 42) gives a case of this kind where the patient suffered for four years from this cause, without its true nature having been suspected; and I have in my own practice met with more than one case of a similar character. But, taken generally, habitual constipation is by far the most common cause. Hence headach from a sluggish state of the bowels is the prevailing disorder of the sedentary, and is very justly noted as a 'desk disease.' A morbid degree of sensibility of the whole frame, rendering it susceptible of slight impressions, sometimes owes its origin to a source often little suspected for a length of time—I mean the urethra. Stricture of some part of this canal I have frequently traced as the latent cause of great constitutional disturbance, of much morbid susceptibility, and as an indirect cause of habitual headach." 37.

Our author notices a nervous headache, resulting from debility or exhaustion. It is accompanied by vertigo, and a sense of falling down, together with great sensibility to the slightest annoyances—the appearance of a veil or network, full of dark moving spots, before the eyes—unsteadiness of thought, fickleness of temper, and despondency. This is a very obstinate form of headache, and most difficult of cure.

The treatment of sick headache and nervous headache Dr. W. divides into two clauses—the palliative and systematic. When arising from crudities in the stomach, they ought to be dislodged, and acidities corrected. Dr. W.

has often found quick relief from a wine-glassful of peppermint water, with a little magnesia and rhubarb. But emetics or purgatives give the most effectual relief. Warm water of chamomile tea alone will often dislodge the enemy.

For the radical treatment of the biliary headache, Dr. W. recommends a course of blue-pill and colocynth, with saline waters, as those of Cheltenham and Beulah. The quantity of saline ingredients in the waters of Beulah is greater than in those of Cheltenham. As these headaches generally depend on deranged function in one or more of the digestive organs, our attention must be almost entirely directed to that source. Great restriction in diet—confinement, for example, to meat and bread, with weak brandy and water—regular, but mild aperients—with alkaline bitters, will do more to remove these headaches, and improve the general health, than all the remedies in Ryan's conspectus.

Dr. W. makes some judicious remarks on headaches from plethora in the brain, and especially in the veins of the head; but we do not deem it necessary to quote them, with the exception of the following passage.

"Headach from fulness of blood in the veins of the brain is apt to occur in men of literary pursuits, and in those whose business confines them to the desk, or to a constant stooping position of the head: these, when conjoined with sedentary habits, and intense application of the mind to some harassing occupation, all concur to derange the equilibrium of the circulation. The first effect is to throw the blood in undue quantity to the head: in time this determination becomes habitual; the brain is exhausted by the intensity and long continuance of the excitement, and the consequence of this exhaustion is congestion in the veins: the healthy tone of the vessels is destroyed; and when this state of engorgement has attained a certain height, some accidental aggravation of it produces rupture of one or more of the vessels, and the patient has an apoplectic or paralytic seizure." 57.

On rheumatic headaches Dr. W. does not much dilate. They are much more numerous than most practitioners apprehend, and are often mistreated. We have found no means so beneficial as the following:

℞. Pulv. Ipecac. c. gr. viij.
Sub. Hyd. gr. ij.
Ft. Pulv.—Hora somni sumend.

℞. Infusi Rhei ℥iij.
Tart. Sodæ ℥iij.
Pulv. Rhei. ℥ss.
Tinct Sennæ ℥ss.
Vini Colchici. ℥jss.

Misce ft. Mistura, capiat tertiam partem prima mane, et repr. dosis alternas horis donec alvus plena respondeat.

If these doses be repeated every second night and morning for two or three times, they will generally remove the disease.

From the 5th section on "ARTHRITIC HEADACHE," we make the following extract.

"Gout affecting the head is one of the most dangerous forms of the disease, and shews itself either as arthritic headach, or as arthritic apoplexy; indeed, the one is the usual precursor of the other. The first is a disease that often escapes detection, especially if the patient has never had a paroxysm of the gout

in its regular form: the symptoms are imputed to a common determination of blood to the brain, and treated accordingly; but this is a mistake of a serious nature, since, in the treatment of gout affecting the organ, all depletory measures are hurtful. Hence it is a disease frequently requiring both considerable discrimination and close observation to detect, as it is only by apparently trivial distinctions that we are enabled to determine its true nature. This form of the disease affects, for the most part, only those in whom gout does not make a demonstration in the open and regular way. It is most frequently to be met with among the higher classes of the community, where this heir-loom of luxury can frequently claim lineal descent on the part of both parents; and it is likewise found in this disguised form prevailing more among the females of a gouty family than the males, and shews itself particularly after a certain period of life. The most pathognomonic of the symptoms characterizing arthritic headach are, a constant sense of fulness in the head, liable to change, from casual circumstances, into severe pain; much giddiness, and a feeling of movement within the head, which keeps continually attracting attention to the sensation, rendering thought confused, and memory forgetful; and at the same time there is often a feeling experienced by the patient as if he were to become insensible: when he stoops, he is apt to be seized with temporary blindness; his hearing is inordinately acute, he is distracted by the least noise, and he is frequently troubled with a constant buzzing in his ears; flushing and heat pass at times over the head and face, the capillitium is often tender to the touch, and the head feels constantly hot and uncomfortable; digestion is often much disordered, the bowels slow, and the evacuations discoloured; the urine is usually scanty, high-coloured, depositing a reddish sediment; and yet, in the midst of so much disordered feeling and function, the pulse, for the most part, remains undisturbed.

The above are the symptoms most characteristic of this specific form of headach, and which, if not removed, are sure to terminate in arthritic apoplexy." 87.

One more extract, and we take leave of this little volume.

"As the most efficacious palliative in any extraordinary urgency of symptoms, we are to have recourse to colchicum, taking care to direct its operation gently on the bowels, by the addition of some sulphate of magnesia; the circulation ought likewise to be solicited to the feet by means of a pediluvium, made stimulant by a table-spoonful or two of mustard flour; and a gentle diaphoresis brought out on the surface by James's powder taken in white wine whey, or some other mild sudorific. But there is an effect produced by colchicum, besides its anodyne operation, that involves certain pathological questions respecting the real nature of gout, which have not been hitherto satisfactorily elucidated—I allude to the effect which colchicum has of augmenting the quantity of uric acid in the urine. There are various circumstances which prove that this acid or its base, urea, superabounds in the blood of gouty people; the result, as I conceive, of a morbid condition of the function of sanguification, or rather, perhaps, of the immediate process of chylification. Now, Chelius of Heidelberg has ascertained that the quantity of uric acid excreted by the kidneys is nearly doubled in twelve days under the use of colchicum.

Another curious circumstance which presents itself in the consideration of this subject, is that *tofi*, or gouty chalk-stones, as they are more commonly called, do not consist, as was once imagined, of phosphate of lime, but of *urate* of lime. I may further notice, that in the decline of every fit of the gout, *uric acid* is always observed to abound in the urine of the patient; and in conclusion I may remark, that the use of alkalis and other antacids has an evident influence in diminishing the formation of urea; while they are found, at the same time, to be among the best preventives of gout. Now, the probable inference from all the foregoing facts is, that gout is in reality occasioned by the super-

abundance of urea in the blood, generated in the intestines by an unhealthy process of digestion, induced by habits of luxury and indulgence; or it proceeds from the same cause, in consequence of the same morbid habit of the digestive organs of a hereditary nature. May not the phenomena of a fit of the gout, therefore, be considered as arising from this excess of urea; and the deposition of it in the form of chalk-stones, and its excretion by the kidneys, be regarded as modes of the salutary crisis?

The above considerations, if well founded, teach us, that though it may be proper to assist Nature, in her effort to accomplish her purpose during the fit, still, in the systematic treatment of gout, our paramount object ought to be to prevent its accession, by counteracting the cause—excess of urea." 89.

The volume concludes with some brief, but judicious hints, of a hygienic nature. In his remarks on temperance and travelling, we coincide entirely—and it is evident that he speaks from personal experience. We hope Dr. Weatherhead will pursue his investigations, and soon come before the world with the results of his lucubrations.

OUTLINES OF COMPARATIVE ANATOMY. By *Robert E. Grant, M.D., &c.* Professor of Comparative Anatomy in the University of London. Parts 1 and 2, 8vo. Bailliere, London.

THE appearance of this work constitutes an era in the history of anatomy and physiology in this country, and will, we doubt not, give an impetus to the pursuit of this interesting and important study, which has been too much neglected in this country—one reason, probably, why physiology, as taught in many of our schools, remains disfigured by many crude theories and speculations, which have long since disappeared on the Continent; tested, as they have been there, by the rigid laws deduced from the successful pursuit of comparative anatomy, embryogeny or organogenesis, and teratology, or the science of monstrosities. The co-ordinate pursuit of these departments of science has given birth to the doctrine of morphology, or the unity of organic elements, which, under the various forms which they assume in different classes and genera of animals, is the very foundation of the French transcendental, or philosophic school of anatomy. The doctrines of this school have hitherto, unfortunately, made but little progress in this country, and, indeed, have but too often met with the ridicule of those who have occupied our professorial chairs, a circumstance which can only be attributed to the generally-prevailing ignorance of the facts upon which the science rests. The work of Dr. Grant, however, will, we doubt not, do much to dissipate this ignorance, deeply imbued, as its author evidently is, with the doctrines of the philosophic school, and familiar as he proves himself to be with the facts upon which those doctrines are founded. From this circumstance, the "Outlines" of our author stand agreeably contrasted with the elementary works on this science, which the mere English reader has hitherto had in his hands. The works of Monro, Fyfe, and even Blumenbach, improved as the system of the latter was by Lawrence and Coulson, are

scarcely more than the records of a number of facts, apparently capable of no generalization, and shown to follow no general and uniform laws.

It is to the constant reference to such general laws that the present work owes its superiority, which cannot fail to render the study of comparative anatomy not only more attractive, and therefore more general, but also more useful; calling into exercise, as it will do, the reasoning powers of the mind, where hitherto too often the memory only was exercised.

Doubtless, many of our readers possess the course of lectures on this subject, which appeared last year in the *Lancet*, and hence may think it unnecessary to possess themselves of the "Outlines;" to beginners however in the science, we would say, study the "Outlines" first, and, having obtained the elements of the science from this work, you will be able to avail yourselves with much greater benefit of the more extensive view of the subject presented to your view in the admirable and elaborate course of lectures to which we have alluded.

In the first part of the work, our author, commencing with the organs of relation, treats of those of support, of attachment, and of motion; or, in other words, of the osseous, the ligamentous, and the muscular systems; the latter of these subjects, however, is not proceeded far with in this part. The plan which our author adopts, is that of commencing with the very lowest forms of animal organization, and exhibiting to his readers the traces which are there met with of the systems under review; he then successively takes up the different classes in the ascending scale, and shews not only the gradual additions made to the several organs, in passing from the less perfect to the more perfect and finished forms, but also the various modifications which the organs undergo, in order to suit them to the peculiar habits and functions of different animals. Finally, the organs pass under review as they exist in the most perfect of all animal forms—in man himself, in whom indeed each organ is not seen to attain *specifically* its most perfect development—a circumstance which would be in the highest degree incongruous, and present to our view a monstrous form far stranger than any of those which Nature occasionally exhibits to us; but in whom that harmonious balancement of the organs, that perfect equipoise, is met with, in which we perceive the most perfect *general* development of all the organs; that is to say, each organ, or rather perhaps each class of organs, assumes the most perfect form that is compatible with a corresponding degree of development in the other organs.

We will proceed to give our readers some idea of the manner in which our author handles his subject, and at the same time to introduce a curious and interesting subject to their notice. The fifth section of the first chapter treats of the organs of support in the vertebrated classes, in which our author introduces the skeleton to the view of his readers in the following words:—

"The most constant and first-formed part of the skeleton is the vertebral column, which is composed of moveable vertebræ, each of which consists of several elements that are found most isolated and distinct in the lowest classes, and in the embryo state of the highest. The elements which appear most constant and distinct in the composition of a vertebra are the round central body, or *cyclo-vertebral* element, the two superior laminæ or *peri-vertebral* elements which encompass the spinal chords, the two portions of the superior spinous process, or the *epi-vertebral* elements, the two inferior laminæ, or *para-vertebral*

elements, which form a cavity for the blood-vessels, and the two portions of the inferior spinous process, or the *cata-vertebral* elements. The cyclo-vertebral elements are tubular in the articulated classes of animals where they envelope the whole trunk as hollow segments, they are nearly solid to their centre, and present two concave surfaces in fishes; they are convexo-concave in reptiles, and have flat surfaces in mammalia. They are the most constant and typical parts of the vertebral column. The other vertebral elements vary their forms and positions chiefly according to the dimensions of the organs they embrace, and the extent of surface required for muscular attachment; consequently they vary much in different parts of the same column, and in the skeletons of different classes. In the caudal portion of the skeleton of an osseous fish they are designed to give great extension for the attachment of the powerful lateral muscles which move the tail. The body of the vertebra, or cyclo-vertebral element, supports the two superior laminae or peri-vertebral elements, which early unite above to form the small foramen for the spinal cord; and beyond their termination we observe the interspinous bone and the ray of the external fin, which are the two epi-vertebral elements placed in a vertical line. The analogous elements are seen on the lower part of the vertebra, where the two inferior laminae or para-vertebral elements form a large foramen for the lodgment of the great continuation of the aorta above, and the vena cava below. The inferior interspinous bone, and the ray of the external fin, are the two cata-vertebral elements placed in a vertical line, like the epi-vertebrals above. These vertebral elements often assume, in the region of the abdomen in fishes, another position: thus the superior elements remain as before indicated, but the inferior laminae or para-vertebrals are stretched out in a horizontal direction, and have the two cata-vertebrals extended from their ends in form of a pair of ribs to encompass the organs of this part of the trunk. The vertebral elements situate above the body of the bone expand in the region of the head in the same manner as we here see those below the cyclo-vertebral element in the region of the abdomen; and this they do in order to encompass the soft parts contained in the cavity of the skull and in the face. The epi and peri-vertebrals are most expanded in the skull and the sacrum, and the para and cata-vertebrals, where they embrace the viscera of the trunk." 59.

The above views with respect to the vertebra are adopted by our author from M. Geoffroy de St. Hilaire, who has published an interesting paper on the subject in the *Mémoires du Muséum*.^{*} They form a favourite doctrine of the transcendental school, and notwithstanding the ridicule which has been attempted to be cast upon it in this country, it may be regarded as one of the best established of those doctrines. Although it was G. H. Hilaire who gave the definite and philosophical view to the theory, with which we find it regarded in the pages of our author, yet the doctrine of the skull consisting of a series of vertebral pieces highly expanded and developed, was first somewhat incidentally glanced at by J. P. Frank, in the year 1792, in his *Delectus Opusculorum Medicorum*.

"I have always been of opinion," says he, "that every vertebra of the spinal column is to be regarded as a small transverse cranium. The last, and most conspicuous and moveable of all the vertebræ is that called the calvaria or skull-cap.†"

This view was taken up and further developed by Oken, and has since

^{*} *Mémoires du Muséum*, vol. 9.

† *Delect. Opuscul. Medic.* Vol. II. p. 8.

been advocated with various modifications, by Dumeril, Spix, Blainville, Carus, Meckel, Cuvier, and Burdach, with many others. Amongst the first of the supporters of this doctrine, we find the Shakespeare of Germany—Goëthe,* who seems to have had a great predilection for the study of analogies, and who may be regarded as the very father of vegetable morphology, by which every part of the flower and the fruit is shewn to consist merely of a modification of the leaf.

These various authors, however, whilst agreeing in the general doctrine of the skull consisting of a series of vertebral pieces, are not unanimous as to the number of such pieces entering into its composition. Oken, Dumeril, Spix, Carus, Cuvier, and Meckel, all unite in assigning three as the number of the cranial vertebræ, whilst Bojanus regards them as four; Hilaire, however, who as we have seen, has investigated the subject more closely, perhaps, than any other anatomist, concludes that the skull is composed of seven vertebral pieces. Hence we find our author, who appears closely to follow the last distinguished comparative anatomist in his views on this subject, observes that—

“The number of distinct osseous pieces in the composition of the skull is greatest in fishes, and they correspond nearly with the theory of this part of the skeleton, being composed of seven vertebræ, each consisting, as usual, of a body, with four elements above, and four elements below.” 63.

For ourselves, however, we must confess that we have always been inclined rather to follow the first of these views, which certainly accords better with what we see in the human cranium, in which we can readily trace the existence of a series of three vertebral pieces, which are thus indicated by Cuvier:—“Le crâne se subdivise comme en trois ceintures, formées—l’anterieure par les deux frontaux et l’ethmoïde; l’intermédiaire par les pariétaux et le sphénoïde; la posterieure par l’occipital.”†

In this view, we cannot see any thing inconsistent with a fair and legitimate use of analogical reasoning, supported, as it is, by the facts observed on tracing the modifications of the vertebra and of the cranium through the various classes of vertebrated animals. Some authors, however, have doubtless prevented the general acceptance of the doctrine, by the crude speculations and fanciful hypotheses with which they have disfigured it.

Of this class of authors, we should regard Spix, who, in a large and expensive folio, has treated of this subject. He believes that, in the cranium, is to be found a perfect repetition of the rest of the skeleton, that of the three vertebral pieces entering into its composition; the superior is the “proper cephalic” vertebral piece—the second is the “thoracico-cephalic,” and the third the “pelvi-cephalic” piece. In the bones of the face or upper jaw, attached to the middle of these pieces, he traces a repetition of all the bones of the upper extremity; and in the temporal bone and lower jaw, appended to the lower piece, that of all those of the inferior extremity; the alveolar processes of the jaws being said to represent the phalanges of the toes and the fingers, which are tipped with teeth in lieu of nails!‡

* Zur Naturwissenschaft, t. i. p. 250.

† Regne Animal, tom. i. p. 63.

‡ Cephalogenesis. Munich, 1815.

As, then, the internal skeleton of the vertebrated classes consists essentially of a series of double rings of bone, giving protection to the central parts of the nervous and the vascular systems, and the great viscera of the trunk, and having the great bulk of the muscles arranged in layers externally, so, also, does the external skeleton of the articulated classes consist of a series of zones or segments, giving a corresponding degree of protection to the same important organs. In these classes, however, the tegumentary system and the skeleton are consolidated together, and the muscles are themselves placed within the vertebral pieces, which here present only one common cavity, from the absence, as we think, of the cyclo-vertebral elements, rather than, as stated by our author, from the "tubular" condition of these elements. The dorsal and the ventral surfaces respectively of the segments of the skeleton, in these classes, appear to us to consist of elements corresponding to the peri- and para-vertebral elements in vertebrated animals, by which names they might appropriately be designated. Indeed, from a somewhat extended consideration of the subject, we are led to the conclusion, that the analogy between the articulated and vertebrated classes is much greater than has yet been generally allowed by comparative anatomists and zoologists; and of which, before we conclude this article, we hope to have convinced such of our readers as have familiarized themselves with the study of comparative anatomy.

If our limits had allowed, we could with pleasure have taken this opportunity of directing the attention of our readers to other interesting and important subjects, connected with comparative osteology, but we have already exceeded the limits which we had appointed for the notice of the first part.

In the second part of the work, our author resumes the subject of the muscular system, which was only commenced in the first part, and traces it through the several gradations it exhibits, in passing through the higher molluscous classes, from the invertebrate to the vertebrate classes—in the latter of which he treats of it successively in fishes, amphibials, reptiles, birds, mammalia, and man himself. As a specimen of the manner in which our author treats this part of his subject, we make the following extract.

"The muscles of *birds* are more red and muscular, more irritable and dense, than in the cold-blooded vertebrata beneath them, and they possess these properties in the greatest degree in the rapacious tribes, where the respiration is greatest, and where all the functions are most energetic. This condition of the muscular system is required in birds, from the lightness of the medium through which they move, and from their quick and long-continued movements through that element. The muscles are more feeble, pale, soft, and palatable in the heavy, slow-moving, phytophagous tribes, where the condition of the bones and most of the other systems, mark an inferior or reptile state of development. The fleshy parts of the muscles are generally short and thick, especially in the arms and legs of birds, and their tendons are generally long, slender, dense, and often ossified, like many cartilaginous parts of the skeleton. The active, heavy, fleshy parts of the muscles being situate, for the most part, on or near the solid trunk of the bird, the extreme parts, so important for progression, are lightened by receiving and supporting only the long, narrow tendons; hence the long, slender legs and the lightness of the arms in this class. As birds have nearly all the same general form and movements, there is remarkable uniformity in the muscular system throughout this class." 165.

In the fourth chapter, Dr. Grant considers the nervous system; and, as the comparative anatomy of this system has assumed, of late, a position of considerable interest, from the definite nature of the additions made to our knowledge respecting it, and from the interesting reference which the subject has to human physiology, we will endeavour to present our readers with as succinct an account as may be of the subject.

That the character of the nervous system is one of primary importance, in determining the rank which animals hold in the scale of development, appears to be generally admitted by comparative anatomists; certain characters distinguish this system, in all the grand divisions of the animal kingdom. The two first grand divisions, of vertebrate and invertebrate animals, have each their peculiar modification of nervous system—thus:

The great central portion of the nervous system is perforated by the alimentary canal, in the invertebrated classes, either in its middle, as in the radiata and the mollusca, or at its anterior extremity, as in the articulata; but, in the vertebrata, the spino-cerebral axis lies wholly above the digestive cavity, by which it is no where pierced." 180.

The three grand classes or divisions of invertebrate animals have each a characteristic form of the great nervous centre; and, from this circumstance, Dr. Grant has appropriated to each a name expressive of this difference, in lieu of those in general use; thus, the terms *cyclo-neurose*, *diplo-neurose*, *cyclo-gangliated*, and *spino-cerebrated*, are respectively applied to the radiated, the articulated, the molluscous, and the vertebrated classes of animals. We do not perceive the necessity for this innovation, nor are the terms themselves beyond the reach of fair criticism; but we pass on.

In the lowest animal forms, those which are embraced by the polygastric and poripherous classes of radiated animals—the infusoria and sponges of the older zoologists, no distinct nervous system has yet been met with; but, as our author supposes, this is most likely owing to the transparency of the nervous filaments in these minute animals (the polygastrica,) which, from the activity of their functions, may be well concluded to possess the rudiments, at least, of that form of this system possessed by the higher invertebrated classes. "In the poriphera (our author thinks that,) the component particles of the nervous and muscular systems are probably diffused through every part of the soft cellular tissue of the body, which possesses the same living properties in every part, and is almost indefinitely divisible without destroying its vitality." In the polypiphera—the zoophyta of the older zoologists, and comprising the corals and madrepores, it is, in the actinia alone, a large and naked polypus, that a nervous system appears hitherto to have been discovered. In this animal, "nervous filaments surround the muscular foot, beneath the stomach, and present minute ganglia in their course, from which nerves pass out to the circumference, and to the muscular folds, which here possess great power of contraction. The same system probably exists in many other closely-allied forms of polypi."

In the two remaining classes of radiate animals—the *acalepha*, or sea-nettles, and the *echinoderma*, of which the *asterias*, or star-fish, may be mentioned as a familiar instance, the nervous system is pretty constantly met with in the form of a circular white cord, surrounding the mouth, with ganglia developed upon it at regular intervals, the number of which ganglia

corresponds with that of the radiating segments of the body. Thus the circular double nervous cord of the beroë pileus, an acalephous animal, is furnished with eight small white ganglia, interposed between the eight longitudinal bands of cilia, which ganglia supply with minute nervous filaments the various parts of the body; and in the asterias, which, as before stated, belongs to the echinoderma, a similar circular cord around the mouth has five minute ganglia, corresponding to the five rays of most species of this animal. In the highest forms of radiated animals, as the holothuria and the sipunculus, the nervous system is beginning to approach that form which constitutes its type in the articulated classes; thus, in the latter of these genera, two minute longitudinal nervous filaments extend backwards from the œsophageal ring, and are developed only on one side of the body, like the abdominal nerves of the helminthoid articulata.

We now come to the consideration of the nervous system in the articulated classes, where, from the striking analogy which recent researches have shewn it to have with that of vertebrate animals, and, hence, with that of man himself, the subject is invested with considerable attraction. The molluscous classes, indeed, have had a higher rank assigned them in the scale of animal organization than the articulated, in consequence of the superior development of their organs of nutrition—of their digestive, circulatory, and respiratory systems. But surely, in a *zoological* classification, the functions of relation, or, in the expressive language of Bichat, “the functions of animal life,” ought to have a higher value assigned to them than those of nutrition, which vegetable forms enjoy in common with animals. In the articulated classes, all the organs of relation, the osseous system (if we may so speak of their skeleton,) the muscular and the nervous systems, and most of the organs of the senses, have all of them become infinitely more closely assimilated to the more perfect forms which they assume in the vertebrated classes, than is the case in any of the mollusca. We know that, by reversing their order, we should be in no better predicament; the highest class of the mollusca, the cephalopods, would then be separated widely from the fishes, to which they are doubtless very closely united; but we merely draw attention to this circumstance, in order to point out the close analogy that the organs of relation, in the articulata, have with those of the vertebrata. In fine, whilst the molluscous classes, with their superior organs of nutrition, evidently have, through their highest class—the cephalopods, a close affinity with fishes amongst vertebrate animals, so, likewise, the articulated classes, with their more perfect organs of relation, seem to us to stand in full as close, or even closer, relation to reptiles among the same classes, the transitions of which may, we think, be detected, from the helminthoid classes to the ophidian reptiles, and from the entomoid classes, more especially the crustacea, into the class of chelonian reptiles.

These observations having been premised, we pass on to the consideration of the nervous system, in these classes of animals.

The nervous system is here found to consist of a double lengthened cord, extending along the abdominal surface of these animals, under the alimentary canal, and forming a double ganglionic enlargement, for the most part, in correspondence with each segment of their articulated bodies. The ganglionic enlargement of the cord, corresponding to the anterior segment or head of the animal, is seated above the œsophagus, the two lateral portions

of the cord, separating as they approach the under surface of this tube, and after encircling it, unite in forming a ganglion, generally the largest in the body. These ganglia give off as many pairs of nerves to the muscles and other organs of their bodies, the supra-œsophageal serving as the origin of several pair distributed to the eyes, the antennæ, and other organs of sense and motion seated at the cephalic extremity of the bodies of these animals. The development of these ganglia is in the direct ratio of that of the organs to which they are distributed. This is well exemplified in the four classes constituting the helminthoid section of the articulata; thus, in the entozoa and the annelida, which as they possess either very imperfectly-developed lateral appendices for progressive motion, or else none at all, and, as they are equally deficient in, or imperfectly supplied with, organs of sense at their anterior extremities, so, also, are their supra-œsophageal and abdominal ganglia in an equally rudimentary condition, and, indeed, frequently not perceptible. In the rotifera, however, "where there is a complex muscular apparatus at the anterior extremity of the trunk, for the motion of the numerous large cilia, and another muscular apparatus for the movements of the strong lateral maxillæ, the nervous system is most developed in that part of the body." In these animals, whilst the supra-œsophageal, with its accessory ganglia, are generally distinct and large, the abdominal ganglia are frequently absent. In the cirrhopods, as "in the anatifæ, we perceive a slender white nervous ring, surrounding the œsophagus, and sending out small filaments to the surrounding parts, but scarcely forming a perceptible supra-œsophageal ganglion, from the imperfect development of the sensitive and masticating apparatus in these fixed and inverted testaceous, or entomostraceous animals. As the long-jointed and ciliated feet, with their thick muscular haunches, and supporting the bronchiæ at their base, are developed from the sides of the posterior part of the trunk, the ganglia, like the nervous columns which connect them, are large in that part of the body, and correspond in position with the origin of the several pairs of legs."

"The nervous system of the entomoid classes presents only a more developed condition of the same plan of structure presented by this system in the worms, and that of the most elevated insect or crab begins its development with the simplest helminthoid form." 190.

From the greater development of the nervous system in this section of the articulated classes, comprising the myriapods, the insects, spiders, and crustaceous animals, it is here that comparative anatomists have most fully succeeded in unravelling its structure, and have thus advanced comparative neurology to its present degree of completeness.

In the myriapods, as, *e. g.* in the centipede, we do not find much to detain us, their nervous system presenting only a more developed form of that met with in the helminthoid classes. With the metamorphoses which are undergone by insects, their nervous system does not remain unchanged. In their larva state, they generally present thirteen pairs of ganglia, corresponding with the number of the original segments of the body, which supply with nerves the soft tissues of which they are now composed. These ganglia, during the process of development undergone by insects in passing from the larva, through the pupa, to the imago or perfect state, are observed to approximate, as well by the shortening of the cords, as by their assuming a zig-zag arrangement during the pupa state. These changes are more par-

ticularly observed in the thoracic portion of the cords and ganglia, which latter afterwards unite together in the situation most suited to send nerves to the yet undeveloped thoracic members. The nature of these changes produced during development, will be understood by our readers on perusing our author's description of the adult condition of the nervous system in the *papilio brassicæ*, as observed and described twenty years ago by Herold.

"In the imago or perfect condition of the insect, the loose inter-ganglionic portions of the columns, which were zig-zag in the pupa, have assumed a straight and shorter form—the two last pairs (the 12th and 13th) have coalesced into one ganglion, and advanced from their original position—the cineritious matter has disappeared from two pairs of the abdominal ganglia (7th and 8th) without affecting the original origins of their nerves—four pairs of ganglia (the 6th and 5th, and the 4th and 3d) have coalesced at two points of the thorax, to supply nerves to the muscles of the legs and wings—the second and first pairs of ganglia have approached in the head, and diminished the diameter of the œsophageal ring, (which was much greater during its voracious larva state)—the cephalic ganglia have enlarged and extended transversely to form the expanded optic lobes." 196.

Remarkable as are the changes which take place in the form of the nervous system in this, and in other lepidopterous and hymenopterous insects, they are not nearly so extensive as those which obtain in the coleoptera, and which have been observed by Straus Durckheim in the *melolontha vulgaris*.

"In this coleopterous insect, where the adult form of the whole body is very remote from that of a caterpillar or of an annelide, all the ganglia have disappeared from the short round abdomen, and have accumulated in three contiguous masses in the middle of the thorax, from which the nerves radiate to the organs of motion, and extend backwards into all the segments of the abdomen. The cephalic ganglia have also increased above and below the œsophagus, and the cerebral lobes passing laterally into the large compound eyes, have advanced still more in their development." 196.

We are indeed much surprised to find that our author never once alludes to the admirable researches of Mr. Newport, "on the nervous system of the *sphinx ligustri*, and on the changes which it undergoes during the metamorphoses of the insect," which have been published in the *Philosophical Transactions* for 1832 and 1834. These researches are not only highly valuable from their fully bearing out the statements of Lyonet, of Herold, and of Straus Durckheim, but also from the extraordinary precision of their details, are themselves of intrinsic importance. The *sphinx ligustri* was selected by Mr. Newport for his observations, on account of the more gradual nature of the metamorphoses which it undergoes, thus allowing of more minute and accurate observation, than is afforded by the *papilio brassicæ*, employed by Herold, in which these changes take place much more speedily. The results in this way obtained by this gentleman appear to us to be much more precise and important than those of the continental labourers in this field, most of whose works we have consulted in express relation to this point. These investigations are equally creditable to Mr. Newport, as they are calculated to raise the British school of comparative anatomy in the estimation of our further advanced continental brethren.

Our limits will not permit us to say more of the nervous system of the *arachnida*, the next class as we ascend in the scale, than that,

"Like most other parts of the arachnida, it presents an intermediate condition of development betwixt that of most insects and that of the higher crustacea." 198.

In the highest class of articulated animals, the crustacea, the nervous system is variously developed, according to the more or less perfect development of the animals themselves. It however, for the most part, affects two general forms—a lengthened one, like that of myriapods, as in the lobster, (*astacus*,) and a concentrated one, analogous to what exists in coleopterous insects, as in the crab-tribe, (*maia*,)—in these latter our author says—

"All the symmetrical ganglia of the columns are generally collected into two masses, the one in the head, and the other in the centre of the cephalo-thorax, and the motor and sensitive columns are almost confined to a nervous band around the wide œsophagus. The anterior of these, or the supra-œsophageal ganglion, is comparatively small in the brachiourous decapods, from the smallness of the cephalic appendices which it supplies with nerves. The infra-œsophageal nervous mass is of great size, consisting of the whole chain of ganglia, which was originally extended along the body behind the œsophagus, and is favourably situated between the haunches of the legs under a strong internal osseous arch, in the centre of the trunk. It sends out numerous branches to the surrounding viscera, and to the five pairs of legs which radiate from around that point; and the columns are prolonged backwards, ramifying along the short slender post-abdomen, as a simple nervous chord." 203.

Having presented our readers with a general view of the anatomy of the nervous system in the articulated classes, we will now turn their attention to what is known of its minute structure, and endeavour to shew to what part of the nervous system in vertebrated animals it is analogous. Very opposite opinions on this latter head have been held by anatomists and physiologists:—thus, Bichat, Reil, and Ackermann, with some others, have regarded the ganglionic cord of insects and the other articulata as analogous to the great sympathetic of man, to which view of the question, by-the-by, our author does not advert. This doctrine, however, seems to be sufficiently refuted by the distribution of the nerves rising immediately from this double cord, which is almost exclusively to organs of sense and motion, as well as by the existence of what has appeared to many as the rudiments of a distinct system of organic nerves in most of these classes. There is connected with the supra-œsophageal and lateral ganglia, (which latter, from their connexion, seem to have a close analogy to the first cervical ganglia in man,) a nervous filament, having two or three minute ganglia on its trunk, which runs backwards above the œsophagus, and between that and the dorsal vessel, to both of which and the stomach it distributes nerves. This nerve is the recurrent of Lyonet, but by Straus Durckheim,* has in the *melolontha vulgaris* been regarded as the rudiments of a sympathetic system, and in this opinion our author appears fully to unite. Mr. Newport, however, in the papers referred to, regards this nerve as the analogue of the pneumogastric or par vagum. This question may then be considered as being still sub judice.

* *Considérations Générales sur l'Anatomie Comparée des Animaux Articulés.* &c. Paris, 1828.

The other view with respect to the nature of the central part of the nervous system in these classes, consists in regarding it as the counterpart of the cerebro-spinal system of man, and the other vertebrata, a doctrine, which as our author states, has been long held by Lyonet, Straus, Dufour, and Chiaje, amongst those who have investigated this part of the animal creation more particularly, and to whose names we may add those of Scarpa, Blumenbach, Cuvier, Meckel, and Gall. We will endeavour, as concisely as possible, to point out to our readers the characters of this analogy. That in the insects and higher entomoid classes the supra-œsophageal ganglia—largely developed as they are, and supplying nerves to the organs of sense—the eyes and antennæ, as well as to those of motion—the maxillæ, and even, if our memory do not deceive us, containing, according to Straus Durckheim, ventricular cavities within their substance—are closely analogous to the brain of higher animals, must, we think be readily acknowledged. But does the ganglionic cord, stretched through their bodies, answer as closely to the spinal cord of the vertebrata? Is its situation the same as that of the medulla spinalis? Does it possess two distinct nervous tracts giving origin to nerves having sentient and motiferous properties? And, if so, how does its minute anatomy bear upon the still undecided question respecting the existence of a distinct respiratory system of nerves? To these questions we will endeavour to give satisfactory answers.

In the first place, with respect to its situation, it occupies the abdominal and not the dorsal surface of the body, but then, says our author—"all the other viscera of the trunk present the same inverted position; the heart-forming portion of the sanguiferous system occupies the dorsal surface," so that the great nervous columns may be regarded as being "extended for protection along the ventral or under surface of the body."

With respect to the structure of these cords, Weber* very satisfactorily shewed that their ganglia had a very precise analogue in the intervertebral ganglia of the vertebrata. These ganglia, with their connecting tracts, would hence seem to correspond very closely with the sensitive columns of the spinal cord of man, which however occupy the dorsal surface of this cord, whilst it is now shewn that the ganglia of the nervous cord of articulated animals occupy the ventral surface of their bodies, and have a nervous tract, without any such enlargements, passing over their superior surface. It appears, from our author, that the existence of these two distinct tracts was known to Lyonet and to Treviranus, the former seventy, and the latter twenty years ago; and he adds that he has "long shewn the same structure to pervade the articulated classes." Thus, then, the tracts of which the spinal cord of insects is composed, participate in that inverted position, in relation to the organs of vertebrata, which we have already shewn to affect their viscera in general.

Mr. Newport, in his admirable paper, which we have again to regret our author has not availed himself of, in the composition of the present chapter, has most satisfactorily shewn the existence of these two distinct tracts in all the entomoid classes, and has given drawings of them, to which we would

* *Anatomia Comparata Nervi Sympathici*. Auctore E. H. Weber. Lipsiæ, 1817.

refer such of our readers as are desirous of prosecuting this interesting subject. The discovery of the motor tract in insects, at least, we believe is the almost indisputable due of this gentleman, as the drawing given by Dr. Grant from Lyonet, to shew that the author was acquainted with the motor tract in the cossus, quite fails in doing so, the inter-ganglionic nerves there represented being quite distinct from the motor nerves of Newport, and evidently answering to what he deems to be respiratory nerves, which we shall now notice, in order to complete the sketch which we have attempted to give of what is known of the neurology of articulated animals.

Between the several pairs of ganglia, in what we have now shewn to be the spinal cord of these animals, pass off on each side from the upper surface of the cord of insects, and most of the entomoid classes, a minute pencil of transverse filaments, distinct from the symmetrical, or moto-sensitive nerves, which pass from each ganglionic space. These transverse nerves have long attracted the attention of anatomists. They are shewn by Mr. Newport to lay above the motor tract, and in many instances to possess small ganglionic enlargements at the point of separation of the nerves. In many instances it is difficult to make out a distinct continuous tract by which the several nerves are united, but this Mr. Newport has accomplished in several instances, more particularly in the carabus, in which likewise the subjacent motor columns are very distinct. This system of nerves forms very remarkable connexions with the rest of the nervous system; thus it is connected by filaments with the lateral ganglia of the head, which we have already alluded to as analogous to the first cervical ganglia of man, and generally each pair of these nerves sends backwards a communicating filament to the adjoining pair of symmetrical moto-sensitive nerves. These transverse, superadded, or, as Mr. Newport designates them from what he supposes to be their function, respiratory nerves, are distributed amongst the tracheæ and dorsal muscles, and the largest branch goes to the trachea coming direct from the spiracula.

Two opinions appear to have prevailed respecting the functions of these nerves, the one of which is, that they are ordinary motor nerves, the other that they constitute the system of the great sympathetic. Mr. Newport does not agree in either of these opinions, but regards them as a respiratory system of nerves.

Dr. Grant appears to be one of those who consider these nerves as motor; at least we come to that conclusion from his employing the two terms respiratory and motor indiscriminately. That, however, they are not ordinary motor nerves is pretty evident, as Mr. Newport well observes, from their possessing very distinct ganglia in several species; whilst he argues that, from their distribution, they must be respiratory nerves.

Their situation and anatomical connexions would certainly rather lead to the idea of their being the analogue of the great sympathetic, but then they are very sparingly distributed to viscera. We would observe, however, that the existence of the respiratory system of nerves in man, as supposed by Sir C. Bell, is far from proved, that the doctrine is altogether repudiated by the best German physiologists, and that the most recent researches and observations tend to refute it. Then the situation of these transverse nerves does not agree with that of the so-called "respiratory tract" of Sir C. Bell,

which holds an intermediate position between the motor and sensitive columns.

In order to make our account of the nervous system of invertebrated animals complete, we extract the following passages from the fourth section of the fourth chapter, on the nervous system of the cyclo-gangliated, or molluscous classes.

"The nervous system is distinctly developed and provided with several ganglionic centres, in all the molluscous classes, from the lowest compound forms of *tunicata* to the highest of the *cephalopods*, and notwithstanding the remarkable diversity of form which the animals of this division present, we can trace a certain similarity of character and unity of place in the development of this system, and in its typical forms, throughout all the cyclo-gangliated classes. In the tunicated and conchiferous animals the columns are chiefly disposed beneath the alimentary canal: in the gasteropods and the pteropods they are more equally distributed around the entrance of the stomach; and in the more elevated forms of cephalopods they at length mount to that supra-oesophageal position which they preserve in all the vertebrata where they cease to embrace the alimentary canal." 201.

"The nearest approach to the vertebrated form of the nervous system is that presented by the *cephalopods*, the highest of the mollusca and of all the inter-vertebrata. The oesophagus still perforates the brain, as in all the inferior classes, but the greatest portion of that organ, and the symmetrical columns prolonged from it, are here placed above the alimentary canal. The brain is enclosed in a distinct organized cranial cavity, numerous symmetrical ganglia are developed on the great nervous axis both before and behind that organ, and sympathetic ganglia are observed in the abdominal cavity." 206.

We will now take leave for the present of our author, and in so doing, strongly recommend his work to all such of our readers as are desirous of acquainting themselves with this most interesting and important science, to which medicine is under so many weighty obligations. If we except Carus' Comparative Anatomy, translated by Mr. Gore, which, however, is too diffuse for beginners, it is the only book in our language, with which we are acquainted, proper to be put into the hands of any one desirous of studying comparative anatomy scientifically.

OBSERVATIONS ON THE CAUSES AND TREATMENT OF ULCEROUS DISEASES OF THE LEG. By *J. C. Spender*. Member of the Royal College of Surgeons in London. Octavo, pp. 210. London, 1835.

It may seem to require no little confidence to write—it certainly demands considerable courage to read, a volume of upwards of two hundred pages on ulcers of the leg, in the year eighteen hundred and thirty-five. The disease is tolerably common—the treatment is not usually considered very difficult—and novelty would appear, from the nature of the subject, to be all but unattainable.

Yet Mr. Spender, a surgeon of Bath, has not been dismayed at the barrenness of the prospect, nor disgusted at the trifling nature of the subject.

He has witnessed in the last five years "about a thousand cases," and experience so vast has not been unproductive of excellent results. The present volume has sprung from the cases, a monument of the industry and the success of Mr. Spender.

The Preface, for there is a preface of eleven pages, contains an apology for writing:—

"Even if his opinions be found deficient in novelty, they are most of them original, so far as the Author is concerned. About five years ago, though ignorant, as he has since found, of some modes of treatment recommended, yet, acquainted with a number sufficient to be perplexed by their want of agreement, and the absence of any principle to hold them together, he commenced the task of observing for himself. Cases soon crowding upon his notice, afforded him the opportunity of drawing some conclusions; and his experience enlarging as he advanced, he was enabled to test their correctness by further observations and trials. A few months since, conceiving that the general and uniform nature of his practical inferences were such as authorized him to consider them, though not exactly in the light of established rules, yet as considerable approximations to the truth, he proceeded to write them down; intentionally abstaining from the examination of any treatise on the subject, until he had recorded the lessons his experience had taught him. In some instances his opinions have coincided with the statements of others; but, in a greater number, the doctrines and practice inculcated by those writers possessing the highest authority and reputation, were at such variance with his conclusions, as to determine him to publish his own." vi.

We shall see, or rather we may tell our readers, that Mr. Spender does *not* think his book altogether wanting in the quality of novelty. If he did, he would not, as he naively observes, be induced to publish it. He flatters himself, in fact, that his readers "will find some new truths struck out, and some old truths placed in a stronger and wider light; together with some errors, both new and old, examined and exposed. He believes, also, though a few may be slower to acknowledge than to perceive this, that the great bulk of readers are very fair and candid in their judgments."

Such are the anticipations of Mr. Spender, such are the objects with which he has communicated to the public and the profession the results of his extensive observations and mature reflections. That those observations and reflections are of value, must be evident from the concluding paragraph of the Preface.

"Whatever may be said or become of the work which the Author thus ventures to publish, nothing can shake his confidence in the correctness of his opinions, which an increasing experience is daily confirming; and nothing shall rob him of the gratification he feels, in being able to describe a method of treatment, which, in his own hands, has already removed the sufferings of so many around him." xi.

This promise of novelty will stimulate the curious, and the prospect of utility will gratify the man of a practical turn of mind. We pass therefore with interest to the pages of the work. This contains four chapters. The first is devoted to—Remarks on the Causes and Classification of Ulcers of the Leg: the second is dedicated to the General Principles of Treatment; the third displays the Application of General Principles; and in the fourth are exhibited the Propriety and Safety of Healing Ulcers of the Leg. We fear we shall be compelled to hurry over the speculations and even the gene-

ral reasonings of our author, in order to select the more practical portions for notice or for information. Yet the first chapter must, on some accounts, detain us.

Our author starts by recording and by combating the prevalent idea, that ulcers are more frequent and more obstinate in the lower than the upper limbs, on account of the dependent position of the former. This is not incidentally touched on, but the demolition of this vulgar error is made a *cheval-de-bataille* by Mr. Spender—is, in fact, brought prominently forward.

At the present time of day, the uprooting of a prejudice is so manifest a triumph, that it cannot be permitted to slip by us unobserved. We shall, therefore give a portion of the argument employed by Mr. Spender.

“The legs suffer from ulcerous diseases much more frequently than other parts of the body. This has been commonly explained by referring to their dependent position, or to their remoteness from the centre of the circulation: but that these circumstances, either separate or in combination, cannot account for the fact, must, I think, appear evident from the following considerations. The direction and locality of the limbs are perfectly natural conditions, and, therefore, to think that these lead to the production of mischief, seems to imply some original defect in their construction. There is, consequently, this presumption against the truth of both suppositions, that they necessarily drive us to the absurd conclusion, that the tendency of the structures is to evil. Without, however, insisting on this, the daily occurrence of facts affords a sufficient refutation of the opinions now under review. One individual has a spontaneous ulcer on his extremity, but for every such instance, perhaps twenty others never experience a similar sore during the whole of their lives. Two persons, of the same age, and of the same general health, shall receive a kick or a blow of the same severity on the same part of their legs—in the one case, the injury will get well of itself, or even in opposition to injudicious treatment; whilst in the other, the greatest care and attention to the mere local accident will not prevent it from running into a troublesome sore. Now the legs of all these four classes of individuals are equally dependent and equally distant from the centre of the circulation, and, consequently, if one or both of these states rendered them liable to the evil, the effects ought to be the same in each case. It is plain, therefore, that we must search for some other cause to explain the fact to be accounted for; and this, in a great majority of the worst instances, as I shall soon attempt to prove, appears to arise from the existence of a positive and palpable unhealthiness of the superficial structures of the limb.” 2.

Let us venture, for a moment, to examine Mr. Spender's syllogisms. He denies the correctness of the general opinion, that the legs are more prone than the superior portions of the body to ulcers, because they are dependent, and because they are more remote from the centre of the circulation. His grounds for the denial seem to be reducible to these:—1, That the direction and locality of the limbs are natural conditions, and to suppose that natural conditions lead to evil is absurd; 2dly, That all persons have their legs lower than their heads, but that not one in twenty has ever a spontaneous ulcer on the leg.

We are not ourselves inclined to criticism; but one who was disposed to examine these positions closely, might observe that they are not of a very logical character. The absurdity of supposing that natural conditions lead to evil, can be felt by that class of philosophers only, who agree with Mr. Square in the eternal fitness of things, and think it a mistake to suppose that the Creator intended either moral or physical evil to be felt. As the

body is composed of various parts, and as all those parts are in some way or other liable to disease, and even to death, it does not appear quite ridiculous to imagine that some should be rather more so than the rest. There would seem to be no great *prima facie* absurdity in this. Facts are perhaps fallacious, yet facts are in favour of that absurdity, so monstrous in the eyes of Mr. Spender. The curves of the great arteries are the parts of those vessels most exposed, by the laws of physics, to suffer from the impulse of the circulating blood; singularly enough, those are the parts of the arteries most liable to atheromatous deposits, to ulceration, and to aneurism. The left ventricle of the heart is the portion exposed to most exertion and the greatest wear and tear; that ventricle is more frequently the seat of disease, of hypertrophy and dilatation, than any other part of the organ. The laws of gravitation would render the return of blood from the hemorrhoidal veins, and from those of the lower limbs, more difficult than from the veins of the head and arms: as a singular coincidence, the veins of the former are more often varicose than those of the latter are; nay, the conformation of the female pelvis, and the natural process of parturition, would tend, still upon physical principles and by mechanical means, to increase the disposition to a varicose state in the veins to which we have alluded, such is unfortunately and oddly, perhaps, the fact. We need scarcely particularise any further instances of this description; they will readily occur to all pathologists, and, indeed, to all practical men. Is the reader contented to suppose them mere coincidences, because Mr. Spender deems it absurd to imagine that a natural condition leads to evil—or does he feel inclined to admit, with some, that the body was not meant by its all-wise Creator, to control all physical agencies and tendencies, but to accommodate itself to them, when possible, to make use of them, and, even when opposed to them, to be opposed at the smallest practicable quantum of expense of vital influence? This latter class of thinkers will not discover more absurdity in the notion that the lower limbs are weaker than the upper, in consequence of their situation and relations, than they find in the melancholy and undoubted truth, that if an individual's heels are tripped up, he inevitably falls, by the operation of the laws of gravity, upon his nose. The physiologist of this school may perceive in the anatomical construction of the veins, and in the disposition of its valves, an arrangement for facilitating the return of the venous blood, but no possible means of doing away with the action of those laws which the same Creator has imprinted on all matter, the general laws of physics.

The second argument of Mr. Spender is drawn from the admitted fact, that although, in all persons, the legs are lower than most other parts of their bodies, yet ulcers of the legs are comparatively unfrequent. To understand the force of this ingenious reasoning, it must first be recollected, that ulcers do really occur upon the legs more frequently than on the trunk, the head, or the arms, and that some general reason for this must exist. Mr. Spender conceives that the reason cannot be, the dependent position of the limbs in question, because that dependency is common to all persons, whilst ulcers are, happily, the property of but a few. The critic may observe, that no one has contended that ulcers must necessarily form upon the legs, because the return of the blood from them is less easy than it is from the head or from the arms; but they have supposed that this condition is

calculated to confer a liability to their occurrences. Let us put an analogous case.—Twenty persons pass through the Pontine Fens, and two of the twenty catch an ague. Mr. Spender, we suppose, would assert with confidence, that the air of the Fens could not have produced an intermittent fever in two, as eighteen others, exposed to the same malaria, had escaped; or let us take another, and a still more parallel instance. A great many ladies are annually brought to bed in Great Britain. A certain proportion get varicose veins of the lower extremities—a certain number also become affected with hæmorrhoids. Mr. Spender will, of course, deny that parturition could occasion either the varices or hæmorrhoids, as all British mothers have not suffered from them.

In point of fact, the dependent situation of the legs has never, so far as we know, been looked upon as more than a predisposing cause of ulcers. Other and more powerful agencies must operate to summon them into existence. Most surgeons are prejudiced in favour of the idea so vigorously assailed by Mr. Spender, and their practice seems to countenance their notions. For the horizontal posture recommended by their theory, is equally recommended by its actual results, and we fear that the obstinacy of the present chirurgical generation will prove too strong for the logic and the cases of our author.

It may seem to some, that we have laid too much upon the back of this small question—that we have unnecessarily gone into the argument. But we wished to present a specimen of the reasoning of Mr. Spender, and to shew our readers a sample of the materials of which his book is made. That sample is, we think, sufficient, and we shall not dwell any further on what, to practical persons, may seem unprofitable matters of theory.

The great object of the first chapter of Mr. Spender's work is to prove that a varicose condition of the veins is a frequent, indeed a very frequent, cause of ulcers of the leg. He proves, by quotations from the works of Benjamin Bell and Sir Everard Home, that his is a discovery upon his part. It may be very true, that no writer on surgery has explicitly pointed out the fact, though, perhaps, even this may admit of doubt. Yet we feel well assured that, whatever surgical writers may omit, surgical practitioners, at all events in London, are not altogether ignorant of the circumstance. There is not a pupil, certainly there is no dresser at a London hospital, to whom both the term varicose ulcer, and the thing, are not "common as blackberries." We can safely declare that, great as is the stress which Mr. Spender lays upon the fact, he has not made it one atom more apparent than it was to us as students. If the surgical profession are so ignorant upon the matter as Mr. Spender evidently thinks them, we can only say that we ourselves were ignorant of that ignorance. Perhaps Mr. S. is right.

We recollect reading an elaborate paper in some penny journal, the object of which was to divide the community into two great classes—those who bought umbrellas, and those who stole them. Mr. Spender has almost as universal an idea of the importance of varicose veins; he divides all ulcers into those which are varicose, and those which are not so.

"All ulcerous diseases of the leg appear to admit of a very easy and natural arrangement in general and local; and, accordingly, this has been adopted by almost every writer. The first, or constitutional class, is subdivided in conformity to the nature of the disease from which the sores arise—as venereal, scro-

phulous, and the like. The subdivisions of the second or local class instead of being derived, as is usually the case, from the mere external aspect of the ulcers, should, I think, be taken from the more important and permanent distinction, arising from the presence or absence of the varicose state. All sores of this class may, therefore, be arranged under two orders, determinable by the condition of the veins—first, varicose; second, non-varicose. Under each of these orders may be retained the species or distinctions arising from the superficial appearance and character of the ulcer, according to the threefold degree of action exhibited—irritable, simple, indolent. Thus we should have varicose irritable, varicose simple, and varicose indolent; and non-varicose irritable, non-varicose simple, and non-varicose indolent. The two general classes may be farther considered as separate or combined, according as the specific sore takes place on a varicose or non-varicose limb; giving, for instance, venereal varicose, venereal non-varicose—each possessing its threefold degree of activity; and so of the rest. The object of such a classification is to make the presence or absence of the varicose affection one of the leading foundations on which the whole is built: as being the elements of the greatest practical importance. When I have observed this simple distinction in practice, I have in general found that it is comparatively of little consequence whether the superficial aspect of the ulcer be what is termed irritable or indolent—exuberant or callous. An attention to the varicose condition of the veins, when present, has, with nearly equal facility, removed each variety of ulcer, by the use of the same form of application hereafter described; whilst, on the contrary, the same application to the same kind of ulcer, so far as its mere external appearance is concerned, varies in its effects, just in proportion as it depends on the varicose state, unless great attention be directed to this constituent of the disease. Nothing can be clearer, therefore, that this last characteristic furnishes a much surer ground for a practical arrangement of ulcers than the former—or rather, that the former affords none at all.” 53.

So we are presented with a simple arrangement of ulcers of the leg, founded on the presence or absence of varices. Suppose we have a scrofulous ulcer which becomes inflamed, or sloughs. All we have to do is to call it a varicose, or, haply, a non-varicose, scrofulous, inflamed ulcer, and the philosophical nomenclature is perfectly satisfactory. This is the sure ground for a practical arrangement of ulcers, which hitherto was not in existence. We were, indeed, in a state of Egyptian darkness before Mr. Spender's book made its appearance. That we are not exaggerating our hitherto unfortunate condition will be evident, we think, from the statement which Mr. Spender presents.

“Another practical evil resulting from the ordinary classification of ulcers, by their superficial appearance only, is the limitation which is given to the employment of pressure. The most strenuous advocates of the bandage and strapping appear very much to confine the use of these remedies to the description of sore, usually called indolent, and to prohibit their employment in what are denominated irritable ulcers. I have been long convinced from experience, that nothing can be more fallacious and unfortunate than this doctrine. What has always guided me in the application of compression is, not the condition of the ulcer, but the condition of the structures underneath; not the question whether the ulcer be indolent or not, but the question whether the veins be varicose or not. I shall in another place have occasion to shew that this deep-seated condition of the limb, is the leading circumstance which should direct us in the employment of pressure, and not the external aspect of the ulcerated surface. All that is here maintained is the fact, that the common arrangement of sores,

tends to confine this most important agent within extremely too narrow bounds." 56.

It would appear from this, that whether an ulcer be indolent or irritable, whatever, in short, be the state of the sore, Mr. Spender disregards this minor consideration, and looks at the structures underneath. If this exposition of his practice be really correct, *au pied de la lettre*—if he treats all varicose ulcers as varicose, whether they be indolent, or irritable, or inflamed, then we must admit there is, indeed, some novelty in his opinions, some novelty, also, in his practice. But we shall see more completely, as we go on, whether such is the actual meaning of our author. The conclusion of the chapter exhibits him well satisfied with the speculative part of his discoveries.

"Instead, thereof, of a mere complicated, and, I believe, sometimes, misleading classification, I have been in the habit of practically arranging all kinds of ulcers under these two very general heads—as they possess, or as they want, the varicose affection and its consequences. A primary attention to this will be found greatly to simplify our views and management of these diseases; and nearly all that is required by the method of treatment hereafter described, with the exceptions there pointed out, is to observe this comprehensive division." 59

Fifty-nine pages have been occupied with the task of proving, that varices of the lower limbs are not the result of their dependent posture, and that ulcers are frequently the consequence of varices. His first position may possibly be questioned by the prejudiced part of the surgical world—his second may be thought, by those who captiously deny all claims to novelty and invention, to be little more than what is familiarly known. Without presuming to offer an opinion, we proceed to the consideration of the second chapter. It is devoted to—

THE GENERAL PRINCIPLES OF TREATMENT.

Mr. Spender remarks, that two circumstances chiefly demand our attention in the management of ulcerous diseases of the legs—the superficial sore upon the surface, and the deep-seated affection of the veins and other structures underneath. Mr. S. divides his treatment into the observance of two leading principles—first, the imitation of a natural process; secondly, the introduction of a healthy action. Such, then, are the great doctrines enunciated by our author, and their truth is not diminished by the spirit of humility with which he exposes the absurdity of all, or most other modes of treatment but his own.

"Now," says he, "if we compare this beautiful, simple, and effective process (the natural process of healing wounds by a clot of blood, or by scabbing) with the method of treating wounds and ulcers in the human subject by poultices and fomentations, vapours and lotions, together with spongings, washings, and wipings, how striking the difference appears; and it is really wonderful that we can continue to go on pursuing a plan which so violates the first lessons of nature. We must become more humble as well as more observant, and be contented to abandon our complicated and cumbersome remedies, which, by losing their simplicity, not uncommonly lose their effect, before we can hope to make much advancement in the treatment of diseases. Nature is to be conquered

only by submitting to her; and he conquers the most easily who submits the most readily." 63.

One would almost be tempted to imagine, that no such thing was practised as the endeavour to procure union by the first intention. Wounds in the human subject are treated, according to our author, by poultices, fomentations, and so forth. How this may be in Bath, we do not know; but certainly it is not so ordered in London. In this, as in the instance of varicose ulcers, Mr. Spender would seem to have imitated, in some measure, that animal which puts its head in a hole, and, seeing nothing concludes there is nothing to be seen. But we must not lose sight of his principia. Well, Mr. Spender, in attacking Nature, takes care not to lose sight of his stoop-to-conquer tactics.

"In obeying this principle of imitation in the management of ulcerous diseases of the leg, I have been in the habit of attending to two things;—employing an application which will form an incrustation, to resemble in its effects the natural scab, and removing the dressings as seldom and with as little disturbance as possible." 64.

A scab, then, as Hamlet says, is "the thing," and the object is to procure it. Mr. Spender's method is this:—

"Of all the kinds of outward application which I have tried, an ointment containing a very large quantity of prepared chalk forms the best artificial crust. The earthy matter must be in a much greater proportion than enters into any ointment in the *Pharmacopœia*, consisting of about three pounds of chalk to two pounds of lard. Even four pounds of chalk will be readily taken up by two pounds of lard; and if about three ounces of olive oil be added, the ointment will not be too stiff, but will easily admit of being spread on the linen. The best method of preparing this application is not by rubbing the chalk down with the lard; but, having previously reduced the chalk to a very fine powder, heat the lard to a tolerable temperature, and, whilst it continues hot, gradually add the levigated chalk in the same vessel in which the lard was warmed. By this means it forms more of a solution than a mere addition; and the two ingredients thus become more intimately blended together. This should be stirred until it is nearly cold, and then placed by for use." 64.

The effect of the ointment is that an incrustation is formed, first on the surrounding skin, then on the margins, and at last on the face of the ulcer. This crust is produced in a very gradual manner; and when the discharge is great, sometimes none is deposited for the first two or three dressings. It is this slow method of its formation that constitutes its excellency; as in this respect it resembles the concretion of the natural scab. In short, the chalk ointment, prepared and employed after the manner of our author fulfils the two conditions required to imitate the natural process. It forms an artificial scab, and does not require such frequent disturbance to the sore as most other kinds of dressings.

Such is Mr. Spender's mode of treating the milder descriptions of sore. It is founded on the principle of covering the ulcer with a scab, under which cicatrization is effected undisturbed. Again we are inclined to ask if this is new—again we are almost led to inquire whether, to use a very homely proverb, there is not more noise than wool in all this. We have seen, in our time, a fair number of trials to heal sores under a scab. One gentleman has done this with an absorbent powder—another has effected it by means

of gold-beater's skin—a third by the eschar produced by the lunar caustic—and now comes Mr. Spender with his new chalk ointment. All these methods have been successively brought forward as specifics in their way—each has been successively vaunted as the best—what Mr. Spender's will turn out to be we shall not venture to predict. In his hands it has of course been successful in an eminent degree.

When the veins are varicose, or adventitious deposits exist, or the tunics of the skin are altered in their texture, or the mechanical form of the sore is very uneven, or any specific poison is present, to produce its influence on the part;—the unassisted efforts of the system are not competent to establish the cure; and, consequently, the chalk ointment, or any other application which derives its benefit from a resemblance to the natural process, must be equally ineffective. Such is the admission of Mr. Spender, and, therefore, he proceeds to his second general principle of treatment—the introduction of a healthy action.

The circumstances which render an ulcer difficult to heal are, according to our author—1, Varicose veins—2, Adventitious deposits—3, The form of the ulcer—4, The existence of constitutional disturbance or debility. For the latter, of course, constitutional treatment is required—for the former there is one remedy, Mr. Spender's main stay, "powerful and well-adjusted compression of the limb." He occupies many pages in explaining the *modus operandi* of compression. That he thinks it capable of doing a great deal, might be guessed from his almost universal employment of it. That guess is, however, more than confirmed by the following remarks.

"I have generally found that the combined application of the two general principles thus generally explained, has fully succeeded in practice. The object which has always been kept in view is, to unite them both in such a manner that the veins and other structures may be supported underneath, whilst the ulcer is properly protected above. When this is done, many ulcers, which at the first inspection appear to be very unhealthy, and would seem to demand some local remedy to cleanse and correct them, put on a more favourable aspect as fast as the pressure restores a more natural action in the parts below. Being satisfied that it is the diseased condition of the veins and other structures, whenever it exists, that exerts the chief influence on the character of the sore, and accounts for its obstinacy, primary attention is directed to this condition, and an improvement in the structures is soon followed by a corresponding improvement in the appearance of the ulcer. When this conversion from an unhealthy to a healthy state has taken place in the sore, the chalk ointment forms a protecting crust to shield its face, and a firm cicatrix is soon produced underneath its covering. Even, therefore, when an ulcer is very ill-conditioned at first, I do not begin by applying poultices to draw it or stimulants to correct it, but simply cover it with the chalk dressing, tightly apply the bandage, and wait and see if its character do not quickly alter under the use of the pressure. When this most useful remedy has acted in the manner already described, the aspect of the sore is almost always changed; and its correction being chiefly accomplished from within, I do not commonly attempt, in the beginning of the treatment, to effect it from without. I have found from experience, that a little patience at the commencement is amply compensated for in the progress of the treatment. For, in almost every case, as soon as the compression alters the condition of the subjacent structures, the character of the superficial ulcer improves, and heals much more readily under the chalky crust than by the use of external stimulants and correctives. The propriety of this method of proceeding I find more and more confirmed by every day's experience, and I now rarely or ever have re-

course to any local or external corrective, how faulty and vitiated soever the sore may appear, until I have given the tight pressure and mild application a fair and proper trial." 87.

Mr. Spender, as our readers may now perceive, is not at all afraid of riding his hobby hard. Tight pressure and the mild application are applied, whatever the state of the sore may be. Great as is the confidence we feel inclined to place in his advice, we should fear tight bandaging in a case of inflamed or irritable ulcer. This may not square with Mr. Spender's theory; but it certainly does seem to be the fair conclusion, from what we have observed. With this observation we arrive at the third chapter—the application of general principles. That chapter contains one hundred pages, and we cannot but admire the multiplying process which can scatter so little matter as there is over so wide a surface.

Mr. Spender commences by a lengthened condemnation of the abuse of poultices, a condemnation which, however just, is certainly possessed of a very small amount of novelty. He attacks, in the next place, though not so violently, the practice of enjoining rest in the treatment of ulcers of the leg. He is almost disposed to think rest injurious.

"But (says he) I am satisfied experience will permit us to go further still, and that it authorizes us to maintain that not only is confinement unnecessary and useless, but absolutely pernicious, by depriving us of a direct and positive advantage which exercise gives to our treatment. It is not enough to say that an ulcer can be healed, notwithstanding the limb is moved, but I believe the cure is hastened by allowing it to follow its ordinary uses, provided it be properly supported by the assistance of a tight bandage. Exercise of the limb, during the healing process, acts beneficially in two very different ways. In the first place it is a stimulus to the action of the parts,—the small vessels, by this means, becoming more energetic in their functions, form more vigorous and healthy granulations, as well as produce them in a shorter period. In the second place, at the same time that the exercise, in combination with pressure, is producing this internal change in the formation and character of the granulations, it is acting as a check on their growth: and by this resistance indirectly increases their strength." 104.

The reasoning is certainly ingenious; but so far as we have seen, it is ingenuity versus fact, for, in the very great majority of ulcers of the leg, that have fallen under our observation and management, the general result has been—the quieter the limb, the quicker the recovery. We fear that the prejudice in favour of repose will be removed with difficulty by Mr. Spender. Yet he speaks with confidence; for he observes that the healthy stimulus given by exercise to the granulations "explains one of the reasons why ulcers get well so *quickly* and permanently, whilst individuals are walking about." It is melancholy when Doctors disagree about facts, yet, on this point, we must disagree with Mr. Spender. He makes his patients walk about pretty briskly.

"From a persuasion that confinement is useless in the cure of ulcers on the leg, and from having seen this opinion verified in many instances, where patients have come to me after having obtained a temporary cure by lying in bed with their legs as bad as ever, I have entirely renounced the remedy, with the single exception where active inflammation exists on the limb. Instead of encouraging rest, even when the patient is able and inclined to observe it, I direct him to use the limb, if suffering from an indolent sore, to the full or even greater

extent than that to which the individual has been accustomed: but if from an irritable one, to a degree rather less." 107.

The result has been, as our readers might anticipate, satisfactory in a high degree. The patients who walk recover as fast as those who are confined, and their cure is far more permanent. We must proceed with our author, to dress our ulcer.

"When I am called to see a patient with a bad leg, I begin by throwing away the poultice, if he happen to have one on—and by telling him to get up, if he happen to be in bed. With the single exception, where the process of sloughing exists and is incomplete, the poultice is entirely abandoned; and unless active inflammation is present, the individual is directed not to lie in bed more than other people." 108.

The limb is now examined *very* attentively, to discover whether there are varices or not. That is, of course, to be examined with great care. The next step is to examine the condition of the integuments in general, and the ulcer in particular. The skin surrounding the sore for some distance, or even separate portions of it, may be excoriated or partially ulcerated; and when this is the case, the chalk dressing must be applied so as to cover such parts, as well as the face of the sore itself. If incomplete sloughing exists in the ulcer, the poultice and fermentation may be continued a little longer. If active inflammation is going on, the ordinary antiphlogistic remedies must be employed, and comparative rest must be enforced. These are the sole exceptions allowed by Mr. S. to his general method of treatment. He smiles at the terms irritable and indolent, exuberant and callous, he dispenses with the farrago of washes and ointments, and proceeds in most cases, undisturbed by the superficial appearance of the ulcer, to apply his peculiar method.

"The first thing is, to cover the surface and sides of the sore for some distance beyond its edges with the chalk ointment, spread about the thickness of a wafer on thin linen. I think the linen is preferable to lint, as it seems to allow the disengagement of the chalk more readily. No compresses of any sort are placed on this, as I am convinced the frequent use of paddings of linen, calico, and the like, placed between the dressing and the roller, are prejudicial, by unnecessarily loading and heating the part, and by confining, or preventing the escape of the matter." 114.

The face of the sore and the surrounding integuments, for some little distance, as well as any other portions of the skin which happen to be excoriated, being covered with a thin linen dressing of the chalk ointment, the next stage of proceeding consists in the application of the bandage. Ten or twelve pages are occupied with a description of the manner in which a roller should be used. The directions may be advantageous to a gentleman in the first twelve months of his apprenticeship, but are certainly not required by any who have arrived at the completion of their studies. Yet one point ought not to be passed in total silence. It is the force which Mr. Spender employs. "With regard to the tightness (he says) with which the roller is applied, I use much more force than is generally employed, pulling it at each turning as strongly as I can by the common effort of the arm, and sometimes even to the full extent of power which I possess." We confess that this does alarm us to a slight degree. We have seen one or two unfortunate results from over-tight bandaging, and our author's roller seems to be *rather* tight.

The dressing and bandage having been put on, the next question is, when they should be taken off again. The interval must be regulated by the circumstances of the case. Mr. S. recommends that the dressings should be removed as seldom as possible. Our author is as particular in undressing as in dressing an ulcer.

“The bandage being undone, the thin linen dressing is raised very gently, in order to allow as much of the chalk ointment to be left behind as may be attached to the surrounding parts and surface of the sore. We shall frequently find, even after the first dressing, that a thin film is formed about the margin, especially at the upper side, however large the ulcer may be; and if it be a small one, in addition to the deposit on the edges, some of the incrustation may probably be observed on the face of the sore. *This must not by any means be taken off*: it is treason to touch the chalky scab. It is, I believe, with some surgeons a very common habit in the treatment of ulcers to wash the bordering skin and edges of the sore, and sometimes to pour water over its centre at each time of dressing. No good, however, can possibly be obtained by this; whilst some evil, and much loss of time, must be the consequence.” 137.

The chalky scab, at the circumference of the sore, increases in size as that heals, and gradually encroaches on its centre. During the progress of the cure, the chalky scab is not in general to be dislodged from the surrounding integuments; but when the sore is very extensive, and the healing is proportionally slow and tedious, the successive deposits on the bordering skin occasionally form so thick a crust as to require its removal. The reason why it is advisable sometimes to take off this is, because it produces a layer sufficiently high to prevent the ulcer itself from experiencing all the good effects from the use of the pressure; this thickness of the bordering parts preventing the uncovered centre of the sore from being compressed as much as it ought. When the ulcerated surface is gradually covered by the chalky crust, and its whole extent is included, it should not be disturbed until a sufficient time has been allowed for the entire part to heal underneath.

Such is the general, we might almost say universal, plan of treatment advised by Mr. Spender. There are, however, two exceptions—extremely deep and callous sores on the one hand, and highly irritable and specific sores on the other. Both of these varieties are improved and assisted by the use of stimulating applications to the ulcer, for the purpose of exciting a healthy action in the former, and for the purpose of altering a morbid action in the latter.

We believe we have given a fair and tolerably accurate account of the substance of Mr. Spender's work. To some, our notice may appear too long—to the author, we are sure it will seem too brief. Its pretensions are great—its execution must be left to the opinion of the public. Such works as these are not altogether undeserving of attention. If good, they should be encouraged—if bad, they should be repressed—the best way of effecting either object is, to shew what they really contain.

ON THE POWER, WISDOM, AND GOODNESS OF GOD, AS MANIFESTED IN THE CREATION OF ANIMALS AND IN THEIR HISTORY, HABITS, AND INSTINCTS. By the Rev. William Kirby, M. A. &c. Rector of Barham. Two vols. 8vo, price Thirty Shillings.

[Bridgewater Treatise.]

WHEN will the system of jobbery, and the misapplication of public funds and private bequests have an end in this country! A ray of hope seems breaking on the moral horizon, like the sun struggling through dense clouds on a Winter morning. Whether the Trustees of the Earl of Bridgewater were *bound* by legal technicalities to *employ* individuals to write these treatises, we know not; but certainly a worse plan could not have been devised for furthering the object of the testator, than that which has been adopted. If the prizes had been held out for the *best* essays, then there would have been ardent competition; and, instead of one languid dissertation on each subject, there would probably have been a dozen—to the most meritorious of which, the donation should have been awarded. The rejected essays would all have been published, and then the object of the dying donor would have been accomplished to an infinitely greater extent than it ever can be at present. In that way, talent would have been called forth, exercised, and rewarded on a large scale—for those who did not bear off the prize, would still have reaped advantage from the cultivation of their powers in the construction of their essays.

Then, again, think of printing these treatises, designed for universal dissemination, in a style, and at an expense, that must limit their circulation to the narrowest compass. Between the lines of the work before us the Earl of Bridgewater might almost have driven his cab! Are scepticism and irreligion confined to a few of the upper classes? It would seem so, from the means which have been taken by the Earl's executors to prevent any but a few of the wealthy from having access to the Essays—Essays meant to illustrate the power, wisdom, and goodness of God! But, as usual, the whole business was a job—and the products have done little credit to this country. To the individual authors we attach no blame—nor do we mean to detract from their merits. They are all men of talent and acquirements; but the proper way of drawing forth these talents was not taken. Had they written in expectation of competition, they would all have written better. And if they were too proud to write *in competition*, we can tell them that, at least as good essays as these, would have emanated from twenty different sources.

The two costly volumes before us are, we imagine, among the best of the Bridgewater treatises. The subject of instinct—and the material organs employed by instinct, throughout the various tribes of animals, cannot be otherwise than interesting to every individual of the medical profession: but how very few can afford the expence and the time which are necessary for the purchase and perusal of these treatises! On this account, we shall endeavour to seize upon, and condense the most prominent and important

points of information in this work, and thus bring them within the reach of all classes and ranks of our brethren.

We shall not waste our own time, however, or the time of our readers, by dwelling on a lengthy and most unwise introduction, in which the learned and reverend gentleman endeavours to illustrate natural history by Scripture, and shadow out the whole material world—the universe itself, by the contents of the Jewish tabernacle!! Thus the “seven candlesticks” were a kind of planetarium, “representing the solar system”—the central lamp was the *sun*—the table and shew-bread were the earth and its productions, &c. &c. But Mr. Kirby is not content with materializing the furniture of the Holy of Holies,—he spiritualizes them also. The candlestick was the church and its ministers—“the lights of the world,” &c. &c. We must leave him interpreting the various symbols of the Tabernacle. The author has justly ridiculed the absurd and atheistical hypotheses and speculations of La Place and Lamarck; but he himself has scarcely been less extravagant and imprudent in his attempts to explain the Jewish symbols, and square all science with the expressions in the Bible. We do not think that the cause of religion is assisted by such forced analogies and strained interpretations, but the contrary. The wisdom and goodness of the Creator are better shewn and *proved*, by a direct application to his works, where demonstration insures conviction, than by those futile attempts to make the **WORD OF GOD** so many oracles of science and natural knowledge, as well as of **REVELATION**.* We are truly glad, then, to take our leave of this most tedious and injudicious “**INTRODUCTION**,” which is equally calculated to make the vulgar stare and the learned grieve! This censure may seem severe. We shall, therefore, give one short extract, as a sample—and rather a favourable one—of Mr. Kirby’s introduction—and if it does not prove the justice of our strictures, we acknowledge ourselves to be the very emblems of stupidity.

“The footstool of the Deity, the pavement on which his throne is placed, is over or above the heads of the cherubim; and though we cannot comprehend exactly the precise meaning of the figures employed, yet the general idea seems to be that of *irradiation*; and by these representations the claim of Jehovah the God of Israel is indicated to supremacy and entire dominion over the physical cherubim, or the heavens in a state of action, and as the sole fountain and centre of that incessant radiation and glory, and of those constant effluxes by which the whole universe of systems and worlds is maintained.” xcvi.

CHAPTER THE FIRST.

This is on the Creation of Animals. In a rather eloquent proemium, the author informs us that *man* was created after the world had been peopled (if we may use the expression) by the various tribes of animals—these last being preceded by vegetables. The *mode* of creation is very conveniently

* Professor Sedgwick has, we think, pursued a wiser plan in his “discourse on the studies of the Cambridge University.” He has leant more on the proofs of wisdom and goodness in the Deity, by reference to his visible works than to revelations of inspired men.

taken from the Bible. On the *fifth day*, "the boundless ocean became prolific, and brought forth, by myriads, its destined offspring." On the same day, "the winged and feathered tribes" sprang into existence. Again, "the word of power was spoken—and instantly the various tribes of quadrupeds issued from her teeming womb." The whole animal creation is despatched in a page or two—and then, "the earth was now completely *furnished and decorated* to receive her destined king and master."

"The sun, the moon, and the stars were shedding their kindly influences upon her; she and her fellow planets had commenced their annual and diurnal revolutions; the plants and flowers, her first born progeny, had sprung out of her bosom, and covered her with verdure and beauty; and the fruit and forest trees flourishing in all their glory of leaf, blossom, and fruit, were ready to minister to the support, comfort, and enjoyment of their future lord: the sea, the air, the earth, were each filled with their appropriate inhabitants, and throughout the whole creation was beauty, and grace, and life, and motion, and joy, and jubilee." 6.

BUT MAN was wanting to add to this joy and jubilee! How far he contributed to increase them, let the heart, or rather the head of man conscientiously determine! The vast superiority of MAN over animals, is, as usual, proved by Scripture.

"When they (animals) were brought into existence, the word was—'*Let the waters bring forth—Let the earth bring forth,*' from which it should seem that God did not act *immediately* in their creation, except by his agency on those powers that he had established as rulers in nature, and by which he ordinarily taketh hold, as it were, of the material universe. But when a being, combining the spiritual with the material world, is to be created, all the persons of the Godhead unite *immediately* in the work, and without the intervention of any other agent, '*Let us make man.*'" 8.

We are informed by our author that at this auspicious æra, "the generations of the world were perfect and healthful." The instincts of animals urged them to fulfil their several functions—but yet this instinct was restrained, otherwise the *carnivorous* animals would have annihilated the *herbivorous*. "They, (the tiger, lion, &c.) therefore, must have originally eaten grass or straw, like the ox." !!!

"And to this vegetable diet, before the close of the present scene, we are assured they shall again return so as to render the last age of the world as happy as the original state of man in Paradise." 10.

This harmony of the animal creation, our author thinks, "continued long enough, after the fall, to allow sufficient time for such a multiplication of the flocks and herds as would secure them from extinction." The author does not inform us at what precise period God altered the *organization* of the carnivorous animals, and adapted them to the digestion of vegetable food. No. He merely gives us his *IPSE DIXIT* that God "restrained their instincts," and ordered the incisor teeth of the tiger to grind corn and rice, till such time as sufficient numbers of kids, lambs, and other animals were multiplied to supply the altered gusto of the leopard, the lion, and the hyena!!

Has the Reverend Author never reflected on the inferences which might be drawn from such doctrines as those which he has here promulgated! If animals can thus be changed in their nature, so far that the tiger may

browse on the flowery lawn with the kid, why need we shudder at the idea of the monkey taking a start of growth, at some remote period, and shooting up into man? It is a transition not a whit less feasible than the metamorphosis of a carnivorous stomach into a graminivorous! See then the folly of making physiology bend to the *literal* text of the Bible! Mr. Kirby has just as good grounds for maintaining that, in the time of Joshua, the sun revolved round the earth, as that the ferocious carnivori fed on corn at any period of the world. It is lamentable to perceive writers of Mr. Kirby's class insisting on the *literal* meaning of a word or passage in one portion of Scripture—but twisting it into a *metaphor* in the very next page of the sacred volume, and when it happens to suit their hypothesis! Cuvier and other naturalists have abundantly proved that the species of animals will never alter throughout any number of ages, but remain the same, in structure and functions for ever. They may mix for a time, and a hybrid race may be produced, but these last cannot procreate. We gladly pass over nearly one hundred and fifty pages of letter-press (independent of the introduction) in order to get at something like plain and rational information. Whenever Mr. Kirby trusts to *himself*, he wanders among the clouds, lost and bewildered in the mazes of conjecture, ever and anon stringing together long quotations from the Bible. It is when he is forced to draw his science from others, and when he permits himself to make use of his own *acquired* information on physical subjects, that he is both instructive and entertaining.

We have now had our worst *say*; but in censuring the *judgment* of our author, we are far from impugning his *motives*. We verily believe them to be of the most benevolent kind—and, without the slightest personal knowledge of Mr. Kirby, we have set him down in our own minds, as a man of single-heart, intense philanthropy, and very considerable attainments. This testimony may well console him for those criticisms (which he will no doubt consider as false) that have been directed against certain metaphysical and theological speculations in the volume before us.

From the chapters on the geographical distribution, and also the migrations of animals, we cannot condense any information suitable to our pages. It is in the fourth chapter that Mr. Kirby begins to approach his subject in earnest, in the lowest grade of animated nature—the *INFUSORIA*—the protozoa and protophyta. These half vegetable half animal beings, distinguished by their simple structure and oscillatory movements, resemble, when collected in masses, a piece of green velvet, covering moist surfaces, or swimming on water. The filaments are continually oscillating from right to left, or from left to right—or in opposite directions, while some of them remain stationary. Agardh, Unger, and others, think that these oscillating plants owe their existence to animalcules which, at first swim about as animals, and afterwards fix themselves as plants. Mr. K. thinks it a contradiction to the general analogy of creation, that any creature should begin life as an animal, and end it as a plant.

Leaving these doubtful forms, however, we come to the *INFUSORIA* themselves—and especially the *polytes* and *zoophytes*, which our author considers as the “basis on which the Deity has built the animal kingdom.” These wonderful animalcules, though every where dispersed like seeds, remain sometimes motionless, for years, till they come in contact with mois-

ture, when they are instantly re-animated—move about in all directions, absorb nutriment, and exercise their re-productive powers. These last are very little different from those of vegetables. They are spontaneously divisible, these cuttings become separate animals—and they are also propagated by germs. But still, they are possessed of irritability and voluntary locomotion—consequently they are **ANIMALS**. Their organization proves this. They have, almost all of them, a mouth and digestive organs—many of them have eyes—and even some rudiments of a nervous system. They may be said, too, to be *omnipresent*. They are found in the sea, the rivers, the air, the blood, the urine, in animal substances, in vegetables—in every thing almost! Their numbers are infinite. Hundreds of thousands inhabit a single drop of water. They are also *proteiform*. Some of them can change their shape at pleasure.

“In nothing is the power and wisdom of their Almighty Author more signally conspicuous. *Organization so complex, and life, and spontaneous motion, and appetite, and means to satisfy it, and digestion, and nutrition, and powers of reproduction in animals of such infinite minuteness!* Who can believe it? Yet so it is, and that each of these should be varied in the different tribes and genera—that these less than the least of all the creatures that present themselves to the observation of mankind, and which till within a century or two were not suspected to exist, should out-number beyond all statement of numbers, all the other animals together that people the whole globe, that they should probably enter into us and circulate in our blood, nestle between our teeth, be busy every where, and perceived no where, till the invention of the microscope drew aside the veil between us and these entities, and we saw how God had filled all things with life, and had based the animal kingdom upon living atoms, as well as formed the earth and the world of inert ones.” 158.

Our readers will perceive some degree of sublimity in the foregoing passage, mixed with some extremely defective English. Observe the second sentence, which we have marked in italics. There is a host of nominative cases, without a single verb to support them! It is really astonishing that men of such learning should be utterly inattentive to the most ordinary rules of grammar!

Our author thinks we may safely conclude that this infinite host of animalcules, “was not created merely to be born and die.” We agree with him. They were created to enjoy existence, just as much as the elephant. This, to us, appears certain. The following is possible.

“With respect to its immediate action upon the vegetable and animal kingdoms, it has been ascertained, as to many species, that they ascend with the sap in vegetables, and are found in the blood and excretions of animals, who knows but they may act an important part in the animal frame; somewhat similar to what devolves upon the larvæ of certain insects, with regard to stagnant waters, they may be the *depurators* where they are thus employed, and contribute to preserve a healthy action. It is true, as far as vegetables are concerned, especially grain, they appear to destroy, where they take up their residence, but when we discover the same or similar species, in sour paste or vinegar, they seem destined to consume substances that cease to be wholesome: and in fact, in all fluids, in which they usually so abound, they may be destined to fulfil a similar office, and it is a remarkable circumstance in their history confirmatory of this idea: that these animals, though animation in them is often suspended for a long time; when they swarm in infusions, having fulfilled their office, perish in a few days.” 159.

But the principle *utility* of these countless armies of animalcules, after the enjoyment of their existence, is doubtless, the supply of food for innumerable animals of a higher order than themselves. Thus it is well known that gold and silver fish require only a fresh supply of water every second or third day—their nutriment must therefore be drawn from the water, or rather from the animalculæ in the water. In this last may often be seen minute branchipods swimming about, sometimes with a bundle of eggs appended on each side. These, no doubt, enter into the bill of fare of the little finny prisoners.

In respect to the **POLYPES**, the most imperfect of them, as the sponges and some of the alcyons, appear to consist of a gelatinous mass, without any organs of prehension. They draw in and throw out water from which they derive nourishment. Most of them, however, have a mouth, with arms or tentacles. These are not only organs of sense, but serve for prehension, motion, and probably for a kind of respiration. The polypes are invariably aquatic animals.

The propagation of the common polypes of stagnant water is curious. It is by germs and cuttings. The former issue gradually from the body of the parent, like the branches from a trunk. The bud that forms the origin of the young one, is a continuation of the old one's skin—and its stomach of her stomach. The food passes from one to the other. After a time they detach themselves from the parent stem, and take an independent existence. In the course of a month, a single polype will thus prove the parent of a million of children! They are also so redolent of vitality, that *cuttings* will become complete animals, thus increasing the other mode of propagation very considerably.

But the most wonderful polypes are the *madrepores* of Linneus, which are capable of erecting rocky reefs, submarine mountains, and extensive chains of islands, that emerge from the ocean, become covered with vegetation, and ultimately populated by animals and man. Vincent Rosa, an Italian naturalist, has described this species of coral in the following words.

“‘From every cell,’ says he, ‘issues a cylindrical animal, resembling an intestine, transversely wrinkled, about half an inch long and two lines in diameter, and of which the upper extremity or mouth is surrounded by about twenty-two very short tentacles. These animals, which are pendent, because this madreporé is always fixed under the projections of the rocks, and vibrates at the will of the waves, are always of a lively orange colour, they contract as soon as they are touched, and they die upon being taken out of the water.’ Whoever examines a fragment of the polypary of any of the varieties of white coral, will find it to consist of innumerable radiating tubes, variously intercepted, all of which appear to issue from a common base; these are the receptacles of the general body of the polype, while the connected individuals with their blossoms inhabit an infinity of cells opening externally, from which the tentacles issue to collect their food.” 181.

For purposes unknown to man, the Almighty has ordered these minute creatures, scarcely deserving the name of animals, to separate or elaborate calcareous particles from the briny wave, with which they build up their structures of stupendous magnitude. Each cell is inhabited by an individual animal—not, however, insulated from the parent body, but forming a part of a many-headed, and many-mouthed monster, which, at every oral orifice,

is collecting the means of still farther increasing the coral palace—thus going on, till it has formed a habitation, not for itself alone, but for whole colonies of vegetables, animals, and the lords of the creation also!

We shall not follow our author in his speculations on the wisdom and goodness of God, in forming the class of madrepores. Hitherto the coral reefs have done little more than prove the destruction of many a gallant ship, and her crew. We are not, therefore in a state to draw any very accurate inferences as to the utility of the madrepore's operations. Many navigators imagine that a day will come when the navigation of the tropical seas will be most hazardous, if not impracticable, on account of the coral reefs. We shall conclude this section of the subject with the following quotation, illustrating the force of **INSTINCT** in the lowest class of animated beings.

“There are two circumstances in the above account of the proceedings of these animals, that more particularly demonstrate Divine interposition. One is the precaution to which they have recourse when they build a circular reef in the sea, that they leave an opening in this part for the entrance of the tide and its reflux, so that a constant renovation of the waters takes place, without which they could not proceed in their operations, for want of their necessary aliment.

The other is, not only that they erect their buildings in the form best calculated to resist the action of the ocean, but also erect break-waters to strengthen the weakest points, and those from which the greatest danger is to be apprehended.

It is clear that beings so little organized, with scarcely any sense of feeling, are not sufficient of themselves to take these precautions, they must be directed and impelled by some power acting upon them; which, foreseeing the want, provides for it.” 189.

The sixth chapter is on the **RADIARIES**. These appear to be a grade higher in organization than the polypes. The tendency to radiation begins even in the mineral kingdom, as is seen in the actinolites, pyrites, &c. It is observable in the blossoms of plants—in the seed in the earth—in the punctum saliens of the egg—in the fœtus—nay, even in sound, heat, &c. The whole world presents radiating bodies in every direction—suns shedding their rays upon attendant satellites, and the Almighty radiating his benevolent care and protection upon all!

As these radiaries cannot be propagated by slips or cuttings, they rise a link above the zoophytes. They are either divided into rays, like the star-fish, or with radiated crusts, as in the sea-urchins, or with radiations in their substance, as in the sea-nettle, or jelly-fish. They have not a terminal mouth surrounded by food-collecting tentacles, but one placed underneath the body. They are never fixed. They are divided by Lamarck into two orders—the gelatines and the echinoderms. In walking along the sea-shore, we sometimes see an animal of the gelatine tribe left by the waves, not much larger than a nutmeg, and nearly as transparent as the purest crystal. If injured by the least touch, it immediately dissolves. These lucid gems of the ocean sail gaily along, by means of their ciliated tails, receiving no injury in their frail organization. They are eminently phosphoric. When numerous, and in warm and calm nights, they afford a most brilliant spectacle. From their rotatory motion, they seem like globes of fire rolling along the surface of the ocean. They doubtless absorb ani-

malcules from the water; and they are destined, in turn, to afford food to vast numbers of fishes—including the monarch of the floods—the whale himself, who does not disdain to dine and sup on these gems of jelly—more luxuriously, perhaps, than the alderman on turtle or white-bait! The sea-nettle is said to have an apparatus for raising or depressing itself in the sea. Many of them cause a sensation of stinging when touched—a low degree of galvanism. Their mode of propagation is not ascertained; but their fertility must be inconceivable, otherwise the whole race would be annihilated, in consequence of their fragility, and inability of resistance. They may be said to be created for the whales, and the whales for them. The masticating organs of the briny monster are precisely calculated for living on the gelatines.

We can spare but little space for the second order—*ECHINODERMS*. To look at a star fish, one would be puzzled to account for its *progressive* motion. But they are furnished with tubes or suckers, by which they can attach themselves to substances, seize their prey, and effect locomotion in the waters. Their structure is very complicated. The jaws alone consist of 25 pieces, worked by 35 muscles—all having one common movement—and indicating that the animal subsists on a kind of food that is difficult of mastication.

The third and last section are the *fistuledans*. The sea anemonies are the most curious—animals which fix themselves on rocks, but have the power of locomotion. From a common base they send forth a number of stalks, terminating apparently in many-petalled flowers of various hues—so that people who have descended in diving-bells, have been astonished to see the submerged rocks covered with beautiful blossoms, of different colours, vying with the parterres of the gayest gardens. They come nearer the polypes in some respects; but their internal organization is much more advanced. They have a separate alimentary canal, surrounded by muscles, and even nervous nodules or ganglions, and ovaries. On the slightest danger, the animal contracts itself into the appearance of a mass of flesh. When inclined to change their place, they glide upon their base, or detach themselves entirely from the rocks, and commit themselves to the guidance of the waves.

TUNICARIES.—These are discussed in the 7th chapter. They are characterized as animals, either gelatinous or leathery, covered by a double tunic—the outer one analogous to the shell of the molluscans, organized and provided with two apertures, one for respiration and nutrition—the other for defecation. The inner envelope is like a mantle. The body is oblong, divided interiorly into many cavities without a head. The alimentary tube is open at both ends, and there is a ganglion sending nerves to the mouth and anus. The animals are either fixed or floating—single or aggregate. The mouth of all is surrounded with tentacles—exhibiting traces of a nervous system—and some of them even of a circulation. Some tribes of these creatures, as the *salpes*, have the property of uniting together, into a kind of community, like those of the bee, beaver, &c. on land—and this union is not fortuitous and irregular—but from birth, and in an undeviating order. It is the only example of such instinctive communities in the ocean. The object of the Creator, in endowing these animals with an instinct so singular, can only be conjectured. They are of a very frail nature (the *salpes*)

—they are so transparent, for instance, that their internal organs, their contents, and their movements, can all be distinguished—hence, perhaps, they would not have been able, as separate individuals, to resist the commotion of the waters in which they live.

The highest tribe of these live insulated from one another, and approach near the *mollusca*.

“The pyrosomes are the largest of the phosphoric animals, the *Atlantic* species being about five inches long, and the *Mediterranean* sometimes attaining to the length of fourteen. Their power of emitting light is so great that in the night they cause the sea to appear on fire. Nothing can exceed the dazzling light and brilliant colours that these floating bodies exhibit—colours varying in a way truly admirable, passing rapidly every instant, from a dazzling red to saffron, to orange, to green and azure, and thus reflecting every ray into which the prism divides the light, or which is exhibited by the heavenly bow.” 227.

Some of the tunicaries, when seized by the hand of the fisherman or sailor, eject the water which they contain with such force into the face of the assailant, that, in the astonishment of the moment, he suffers the animal to escape.

MOLLUSCÆ.—Although the great majority of this class of animals are aquatic, yet a considerable number of them are terrestrial, as any one may see after a shower of rain in the country—the snails or slugs.

This term comprehends a great number of animal forms, and it is difficult to select any character that is common to all. Conchology, indeed, is a study of great extent in itself—and when the structure and functions of the animals are added to the study of the shells themselves, it increases it tenfold. The molluscans may be designated as—“animal soft, without articulations—mantle-bilobed, enveloping more or less the animal. Gills varying. A heart and circulation. No medullary chord, with ganglions, but a few scattered ganglions, from which the nerves issue to various parts. Body commonly defended by a calcareous shell, to which it adheres by only one or two points.” The general habits of a large family of these seem to be that of *boring* and *burrowing*—many of them piercing wood, and even rock—others burrowing in the sand to a great depth. They are thus led by instinct to form a convenient cell or habitation for seizing their food, the precise nature of which is not yet ascertained—probably animalcular. The *sheathed* polype builds a house for itself, of matter elaborated in its own stomach, while the *borer* pierces wood, rock, &c. Our author thinks that Providence has willed these tiny animals to be the slow but sure agents, that effect immense changes on the earth's surface. Thus, rocks that form the apparently impregnable barrier of the land against the ocean are honey-combed by the polype, and eventually give way before the everlasting surges that assault them. This may be the case; but we confess that Mr. Kirby sees much further than we can into the secret designs of the Almighty, in giving existence to the molluscans. The reverend author is more satisfactory when he describes the ingenious manner by which these little animals effect the various purposes to which their instincts prompt them. The account of the *razor-shell*, *arkle*, and *timber-borer* is very curious, but we must refer our readers to the volume itself. His description of the *timber-borer*, or ship-worm, clashes somewhat with the beneficent purposes for which the mollus-

cans are said to be created. These minute animals commit the most dreadful ravages on ships and houses, often bringing the habitations of man to the ground, destroying the inmates in an instant, when they thought themselves in security—or sinking a gallant ship, which, a few minutes previously, appeared perfectly sea-worthy! Fortunately they have an aversion to fresh water, otherwise the foundations of our bridges would soon be undermined.

“The law laid down to the ship-worm is to hasten the decay of timber, that is out of its place, and may be denominated an unsightly encroachment upon the ocean—this is the law they must obey, and they make no distinction, whether it is disowned by all, or an important and valuable part of man’s property. Their individual *object*, as has been stated above, is their own benefit, and they neither know that they obey a law of God, or injure man, but the Almighty by an irresistible agency impels them to it, and they fulfil the purpose of his Providence, at the same time that they provide for their own welfare.” 245.

This is the proper statement of the case; the laws of instinct, like the laws which govern the whole solar system, were imposed never to be altered, whatever temporary or local inconvenience might occur. Yet it is believed by perhaps the great majority of the human race, and even in this enlightened country, that the Creator is perpetually interfering with his own laws, and dealing out special interpositions and dispensations, at the intreaty of individuals, or bodies of individuals—or, perhaps, from mere caprice! Such doctrines are degrading alike to God and man!

But to return. The author adduces some curious particulars in the natural history of the oyster. Of all shell-fish this is the most rude and unsightly—yet, in every age, it has been the one most in request. Like all other molluscans, it is hermaphrodite, and a single individual contains upwards of a million of eggs—so that one oyster may produce *twelve thousand barrels* of the same animal!!! It is not likely, therefore, that the epicurean appetite of man shall ever annihilate the oyster! They have other enemies besides man. It is said that certain species of crabs get into their calcareous citadels, by first introducing a piece of stone between the shells, to hinder their shutting. It is certain that the oyster defends itself against intrusive enemies, by squirting forcibly upon them water, kept in reserve within their shells. They keep out those which endeavour to pierce their tabernacles, by thickening the shell at the part attacked! This, in itself, is a wonderful specimen of animal instinct!

The pearl oyster is interesting, from the ornament which it produces to gratify human vanity, and the early notice which it has obtained, both in sacred and profane history. But we dare not dwell on the almost infinite variety of the conchifers and molluscans—the pteropods, gastropods, tracheopods, heteropods, &c.

“Enough has been said to prove that they have in no respect been neglected or overlooked by the Almighty Being who willed their existence, and who is ever watchful over the creatures of his hand, to provide them with all things necessary for their being, consistently with the ends he created them to serve.” 266.

CEPHALOPODS.—In the 10th chapter, our reverend and learned author arrives at a class of animated beings, remarkable, not only for their organization and habits, but for their position in the animal kingdom—as they

seem to include elements from both the great divisions of that kingdom. From the VERTEBRATES, they take the beak, the eye, the tongue, the ear, the crop, the gizzard, an analogue of the spine, &c.—while, from their own sub-kingdom, they retain many of their remaining organs.

“From these circumstances it seems evident that the Creator has placed this tribe in a station which leads to very different and distant points in the animal kingdom, and that there is scarcely any but what may recognize in it one or more of its own peculiar features—yet at the same time it exhibits many characters, both in its most extraordinary outward form and in its internal organization, that are quite peculiar and *sui generis*, of which no animal at present known exhibits the slightest traces. To mention only its muscular apparatus, adapted to its unparalleled form; its system of circulation, carried on in the first Order by three distinct organs instead of one heart; and the wonderful complication of their tentacles, of the nerves that move them, and the vascular system that animates them.” 305.

Cuvier denominated these wonderful animals CEPHALOPODS, from their feet being attached to their heads. Mr. Owen has divided this class into two orders, from the composition of their respiratory organs—namely, into those that have two branchiæ, and those that have four. The first includes those that have no shell—the second those that have one shell. In the first order is the cuttle-fish—one of the most wonderful of God’s works.

“Its mouth is surrounded by eight long fleshy arms, or rather legs, somewhat conical in shape, and acute at the end, moved by innumerable nerves, furnished from numerous ganglions: these legs can bend in every direction with the utmost vigour and activity, their surface is furnished with many suckers, by which they can fix themselves strongly to any thing they wish to lay hold of, and by means of which, like the star-fish, they can move from place to place. When this animal walks, in this resembling also the star-fish and sea-urchin, it moves with its head and mouth downwards and its body elevated. It swims also and seizes its prey by means of these organs: besides these arms or legs, for they perform the functions of both, there is a pair of long organs, one on each side, having their origin between the first and second pair of legs, which are incrassated at the end, where, also, they are furnished with many suckers. Cuvier supposes they use these as anchors to maintain them in their station during tempests, and as prehensile instruments, by which they can seize their prey at a distance. In the centre of the legs is the mouth, surrounded by a tubular membranous lip, including a beak, consisting of two mandibles, like that of a parouet; these mandibles or jaws are crooked, and the upper one fits into the lower as a sliding lid into a box. With these redoubtable jaws the cuttle-fish devours fishes, crustaceans, and even shell-fish, which receive a further trituration in its muscular crop and its gizzard. By means of the suckers on their legs and arms, they lay such fast hold of their prey as to deprive them of all power of motion; thus they master individuals much larger than themselves. The hard and often spinose crust of crabs or lobsters cannot withstand the action of their tranchant jaws, and they do not fear the gripe of their claws. Their large eyes, which resemble those of vertebrated animals, by their look of ferocity, are enough to create an alarm in the animals they pursue, and are said to see in the night as well as the day. So that although they are not like Pontopidan’s Kraken—the notion of which is thought to have been taken from a large cuttle-fish—half a league in circumference, so as to be mistaken for floating islands, yet they are really as tremendous animals, their size considered, as any that Providence has commissioned to keep within due limits the populace of the waters.” 308.

They have three hearts. The principle one, seated in the middle, sends the blood through the arteries. The blood returns by a vein, which, dividing into two branches, carries it to the two lateral hearts, each of which sends it to the branchiæ for oxygenation, whence it returns to the middle heart. This is, as nearly as possible, the human circulation. These animals are remarkable for the possession of an organ which secretes a black fluid, with which they can render the water so turbid, on any appearance of danger, that they can thus conceal themselves from the enemy, or from the prey which they have in view.

We must pass over the pearly nautilus, which has excited so much attention from the time of Pliny to the present moment. By a single expansive organ, bearing resemblance to the foot of the snail, this animal is enabled to progress through the waters. Our author believes with Pliny, and many since his time, especially Bosc, that the nautilus spreads its light wings or sails to catch the breeze, and uses a kind of oar, at the same time, to accelerate its motions. Mr. Kirby next inquires into the object of HIM who does nothing in vain, though the end may not always be evident, in producing these miniature monsters of the deep, so wonderfully organized, that they are unlike every other tribe of animals, and yet contain in them, as it were, the elements of those above and those below them.

"It appears from the united testimony of every writer that has noticed them, that they have it in charge to keep within due limits, a tribe of animals, almost equally destructive with themselves, and which are armed also with weapons of offence, apparently equally terrific to their prey. It will be readily perceived that I am speaking of the *Crustaceans*, and of the formidable pincers with which they seize their prey. It must be a curious spectacle to see one of the larger polipes attack a lobster; at first sight, we should think the latter most likely to master his assailant, covered as he is with a hard crust, and using adroitly his powerful forceps, we should feel sure that the cuttle-fish, with his soft body and oral organs equally soft, stood no chance against such an antagonist. But He who gave him his commission, has fitted him for the execution of it, his soft tentacular organs will bend in every direction, and the numerous suckers where-with they are planted, by pumping out the medium that forms the atmosphere of marine animals, produce such a pressure wherever they are fixed, that, struggle as it may, it cannot disengage itself from the grasp of its assailant; and, by their flexibility, these organs can imitate the fishermen, and tie together the two pieces of the forceps, so that it cannot bite: thus, at last, it is brought within the action of the powerful beak of the cuttle-fish, which soon makes its way through its crust, and devours it shell and all. Even when at a distance, by means of its long arms, the cuttle-fish can lay hold of it and drag it towards it; and the poulpe, which has not these arms, makes up for it by having longer legs." 315.

One great object seems to be attained by the creation of this immense variety of molluscan animals—the production of CALCAREOUS MATTER. Even the shells of terrestrial testaceans must add, in no trifling degree, to the quantity of that matter on the surface of the earth, and probably make up for the continual waste or employment of it, so as to maintain the necessary equilibrium. But, in the ocean, the quantity, added to that produced by the corallines, must be prodigious! As the corallines raise reefs and islands, so the molluscans are raising the general bed of the ocean by their exuvix!

The eleventh and twelfth chapters, on worms and annelidans, we must pass over, as not particularly interesting or novel; yet we cannot help of-

fering one short extract respecting the *utility* (for our author is an *utilitarian* of the first water) of the *cerebral hydatid* of the sheep, and the *intestinal worms* of man.

"Though at first view the animals of which I have in the present chapter given some account seem to be altogether punitive, and intended as scourges of sinful man both in his own person and in his property, and their great object is hastening the execution of the sublapsarian sentence of death, yet this evil is not unmixed with good. Though fearful and hurtful to individuals, yet it promotes the general welfare by helping to reduce within due limits the numbers of man and beast. Besides, with regard to the Lord of the Creation, these things are trials that exercise his patience and other virtues, or tend to produce his reformation, and finally to secure to him an entrance into an immutable and eternal state of felicity, when that of probation is at an end, so that the gates of Death may be to him the gates of PEACE and REST." 331.

This reminds us of a presbyterian sermon which we once heard in Inverness, respecting cholera. The preacher assured his congregation, that the just man need not fear the epidemic which had then broken out, since he that worshipped the *true God* would escape DEATH. He concluded, however, with a sophism, that if a just man did happen to be carried off by cholera, it would not be DEATH, but a transition to eternal LIFE!

According to Mr. Kirby's doctrines, the medical art is exercised against the special workings of the Almighty! For surely if intestinal worms are "*intended* as scourges of sinful man," and their object is to hasten "the execution of the *sublapsarian* sentence of death," the calomel and scammony of the doctor must be an abomination in the sight of Heaven—or rather it must be perfectly useless, since it is not likely that the drugs of man will be able to arrest the direct decrees of his Creator! One more extract, and we shall close the volume. It contains matter of a very serious kind, and on which we shall venture a few comments.

"But to speak soberly, all we can safely affirm is, that He who decreed the *end* decrees the *means*, and these probably are physical ones under his direction. He it is who *guides the punitive animals* that he employs to their several stations. Is there not an omnipresent Deity, whose action is incessant, and co-extensive with his presence? He it is that, as the Prophet speaks, causeth it to *rain upon one city and not to rain upon another city*; that employs his instruments, both of benediction and punishment, according to his will. It is He, who by secret paths, and by means that mock our researches, conducts to their assigned station the animals in question. Every power of nature, every physical agent, is at His disposal. His is the earthquake and the volcano; the *lightning of the thunder*; the fire-damp of the mine; the overwhelming violence of the water flood; the *windy storm and tempest*: His is the wide-wasting *sword*, that destroys myriads, and the *pestilence that walketh in darkness*, and carries off millions; and He gives his commission to all his scourges *against individuals as well as against nations*, which they unconsciously execute and cannot exceed, for He saith to them, as to the raging sea, Hitherto shall ye come and no further, and here shall the work of destruction cease." 362.

This doctrine embraced, the inevitable inference is, that there is no such thing as an *evil principle* in nature. If the Almighty guides the sword, and gives "his commission to *all* his scourges—against individuals as well as against nations," that BEING of whom we have heard so much, and whom we hate so heartily, has been most slanderously abused and belied!

The office of SATAN is a complete sinecure, and, in these reforming days, will doubtless be abolished! What, then, has become of the evil passions and propensities of our nature? Where is the free-will of man, to embrace good or evil? Why are we said to transgress and break God's laws, when "the commission to *all* his scourges" comes from God himself? This doctrine is far worse than that of blind chance and fatalism! According to Mr. Kirby, it was the hand of the Almighty that fired the 25 muskets against Louis Philippe's cortège, and slaughtered the innocent and guilty indiscriminately! Where can be the justice of future rewards and punishments, if the sword, the dagger, the fire-damp, and the poison were guided by almighty, and, consequently, irresistible power? No, no.—The Almighty laid down general laws at the beginning, for man, for animals, for the elements, and even the Universe around them. These laws, being founded in infinite wisdom, require neither revision nor supervision. They are eternal and immutable. The animal creation he has bound by instinctive laws, from which they cannot deviate. To man he has given REASON, and, consequently, liberty to transgress some of his laws, both moral and physical, with the certainty of punishment for the transgression—thus making him a responsible BEING. But the doctrine of our author would take away all moral responsibility, since no will is left to the individual. There can scarcely be a more terrible or savage idea of an Omnipotent Power formed, than that which represents him as impelling irresistibly his creatures to deeds of good and evil, and then rewarding the one without merit, and the other without culpability! There is something frightful, too, in pointing out every calamity or affliction that befalls an individual as a direct dispensation of the Almighty! and thus, in fact—

To deal damnation round the land,
On each *we judge* his foes!

But enough of theology. We have now run through the first volume, culling the most precious specimens of the work, and exhibiting half of the links that form the immense chain, reaching from the animalculæ in the drop of water, up to the half-reasoning elephant—nay, to the lord of the creation himself! In these times, when knowledge of all kinds is being diffused, with rapidity, through every ramification of society, we shall not deem it impolitic or useless to diverge a little, occasionally, into the collateral sciences, and thus diversify the severer studies of practical medicine. In our next number, we hope to complete the chain of communication between the lowest and highest grades of animated nature, and, in so doing, anticipate the approbation of our subscribers.

CUTANEOUS DISEASES.

1. A THEORETICAL AND PRACTICAL TREATISE ON DISEASES OF THE SKIN. By *P. Rayer*, M.D. Second Edition, 8vo, pp. 1238. London, 1835.
2. ATLAS OF 26 COLOURED ENGRAVINGS: Quarto.
3. PRACTICAL COMPENDIUM OF THE DISEASES OF THE SKIN. By *Jonathan Green*, M.D. Octavo, pp. 371. London, 1835.
4. CYCLOPÆDIA OF PRACTICAL MEDICINE.—Various Articles.

IN the Number of this Review for October, of last year, we submitted to our readers' attention a moderately extensive analytic notice of Rayer's Treatise on Cutaneous Diseases, availing ourselves of that opportunity to state freely the leading merits and demerits of the classification which he has proposed, and of the descriptions which he has given. We also commented on the manner in which the English translator, Mr. Dickenson, had performed his task, and pointed out to him the changes which ought to be made, in the event of his work arriving at a second edition. It may be remembered, that Mr. D. has considerably abridged the contents of the original, by condensing the narrative in several places, and by omitting the detailed reports of the numerous cases with which M. Rayer has illustrated his descriptions. The present translation, executed by Dr. Willis, contains the whole matter of the French edition. It is, therefore, a much larger work; and its value is greatly enhanced by the accompanying volume of coloured plates, which represent, with a most faithful accuracy, the appearance of every cutaneous disease. We are pleased that the work of Rayer has been, at length, presented to the English reader in its full amplitude and extent, for it is only in this way that the high value of this author's labours can be duly appreciated. The comprehensiveness of its design, the minute accuracy of its details, the admirable erudition and labour of research with which every topic has been treated, and, withal, the soundly-practical precepts which are everywhere inculcated, justly entitle it to the proud eminence of taking a place in the ranks of medical literature, by the side of Good's Study of Medicine and of Cooper's Dictionary of Surgery.

The Practical Compendium of Dr. Green forms a popular and very useful introductory work to the larger one of Rayer. In the descriptions of most of the diseases, he has drawn largely, but not servilely, from the ample stores of his French compeer; illustrating, however, each subject, by frequent reference to the results of his own observation and experience, and dwelling more particularly on the striking efficacy of the various forms of baths, in the treatment of some of the most obstinate diseases which affect the skin. There can be no doubt that the remedial and curative effects of baths, simple and medicated, have been hitherto far too little appreciated in this country. The physicians on the Continent have always recognized their value more highly than we have done. Whether the neglect with which they have been treated by us, has arisen from the too general doctrine of

referring almost all cutaneous diseases to derangements of the alimentary passages, or from the circumstance, that so many of the British quacks have, of late years, resorted to medicated baths as specifics (and, by the way, very profitable ones) for all and every ill that flesh is heir to, we need not tarry to enquire; but we are very certain that, on the one hand, the "stomach and bowel pathology" of our physicians has been carried to an extravagant and most pernicious extent, and that, on the other hand, not a few cases, which have long and most unhandsomely resisted all the therapeutic attacks of the *regulars*, have very readily yielded to a course of baths, under the *enlightened* superintendence of Mr. —, in the City, and of Mr. —, in the more fashionable neighbourhood of the West End. Indeed, the whole *manège* of these establishments is well designed for the *disinterested* views of the medicated-bath doctors. The patients usually go in the early part of the day, an hour or two after breakfast-time. The baths are fitted up in the most elegant and comfortable manner, and generally are rendered more efficacious (at least the patients must believe this) by their being impregnated with aromatic and other agreeable herbs. After being well steamed for a sufficient time, the body is briskly rubbed until a pleasant glow is induced. The clothes being put on, a dish of excellent coffee, served on a silver waiter, is brought to comfort the inner man! Now surely all this is infinitely better worth a fee than to be doctored with pills, draughts, and potions!!

Of a truth, these men of the world are wiser in their generation than the sons of legitimate science; and they have their reward, not only in a rich harvest of pounds, shillings, and pence, which annually replenish their garners, but also, it cannot be denied, in their occasional cures of some maladies which have defied the attacks of all the recognized contents of our pharmacopœias.

We are anxious to draw the attention of our brethren to this subject, and advise them to lay aside all feelings of mortified pride, if these really do exist, and to cease to undervalue a remedy merely because it is patronized by the irregular practitioner. The practical observations of Dr. Green will powerfully contribute to correct an error which has too long existed; and, indeed, no portion of the Compendium is so useful, as the illustrations which he has given of the admirable efficacy of well-regulated baths, in the treatment of skin diseases. The following extracts may be read with advantage, as preliminary to the treatment of individual diseases.

"The simple cold or tepid bath frequently gives great relief in many diseases of the skin, greatly allaying the itching, and state of nervous irritation that attend them, and thus conducing to the ultimate cure." "Baths of the natural mineral waters have been long known to prove very serviceable in many diseases of the skin. These are susceptible of being closely imitated by art; we can, indeed, in this way produce more powerful and more speedy effects than result from bathing in the natural mineral springs. The artificial sulphureous water bath, with a quantity of gelatine or fine glue dissolved in it, is one of the best baths known in many inveterate diseases of the skin.

But every form of water bathing that has been tried falls immeasurably short of the hot air and vapour bath, in its immediate and powerful curative influence on the great majority of the diseases of the skin. The hot air and vapour bath may very properly be spoken of together, inasmuch as their effects on the system are very nearly similar. I am in the habit of administering the hot air bath to

patients at first, at the temperature of about 98° of Fahrenheit, and of raising it gradually in the course of from fifteen to twenty minutes to 110°, and, if the full effect of the bath is not obtained, to 120°, or even 130° of the same scale. The patient, seated in the apparatus and exposed to this degree of heat, is only sensible at first of a slightly increased but pleasant warmth. Within a few minutes the expression becomes cheerful and animated, the eyes sparkle, the countenance looks florid and then flushed, the pulse rises in frequency, and gains much in fulness, but is soft; the whole body, the face (which of course is not inclosed) as well as the other parts, next become bathed in perspiration, so that the sweat is seen standing in beads upon the forehead and trickling down the cheeks. The patient is now no longer sensible of any increase of temperature, although he is perhaps exposed to a heat of 150 degrees of Fahrenheit."

"After the perspiration has appeared about five or six minutes on the forehead, the full effect of the bath has been obtained, and the patient should immediately quit the apparatus." 20.

The therapeutic agency of the simple hot air and vapour baths (although these alone are often sufficient for the cure of many obstinate cutaneous diseases) is greatly promoted in particular cases, by their being impregnated with the fumes of certain substances, more especially of sulphur.

"This is now administered by a process of sublimation; the mineral is not set fire to and burned as used formerly to be done, and as is still practised in imperfectly constructed fumigating apparatuses, by which the patient is enveloped in an atmosphere of sulphurous acid gas, and runs considerable risk of being stifled each time he adventures himself within them. In my establishment, although twenty sulphur baths are frequently administered every day for weeks together, no smell of burning brimstone is ever perceptible. The mineral is raised unchanged, in a state of impalpable vapour, and is thus applied in a form which we may presume to be the most favourable possible, either for exerting its influence on the system at large, through the medium of the absorbent vessels, or upon the skin immediately, with which it is brought into such intimate contact. Applied in this way sulphur has certainly a greater curative influence on many of the inveterate and chronic diseases of the skin, than all other means besides when added together. Besides the powerful excitement of the skin accomplished by the application of a high temperature to its surface, the sulphur fumes have the property of causing a remarkable desquamation or peeling of the cuticle, to which probably some portion of their efficacy may justly be attributed." 21.

In our analytic review of the particular diseases, we shall meet with numerous illustrations of the truth of these remarks.

Dr. Green, although himself a superintendant of a bath establishment, is well aware of the great importance of constitutional treatment, both before and during the employment of any remedies applied directly to the surface of the body. Adopting the principles, that almost all cutaneous diseases are, in their commencement at least, of a more or less inflammatory nature, (a doctrine which was first insisted upon by the French physicians) he strongly inculcates the general propriety of antiphlogistic remedies at first.

In the acute forms, or when the eruption on the skin is accompanied with symptoms of constitutional excitement, the necessity of such a treatment must be too obvious to require any illustration. We need not allude to the more violent and severe exanthemata, as Variola, Rubeola, Scarlatina, &c. in proof of this assertion. In the milder diseases of Erythema, Roseola, Lichen, and Urticaria, the antiphlogistic regimen will be found to be equally salutary in practice. A single bleeding, followed by the use of a

cooling purgative and of a light diet continued for a few days, forms by far the most successful treatment—in the early stages of such cases. Even in many of the more chronic forms of cutaneous disease, the advantages of a depletory regimen, at least as preliminary to the adoption of other means, have of late years been recognized by some of the most experienced physicians, both at home and abroad. The following observations of Rayer deserve to be generally known.

“I have derived the greatest benefit from venæsection in numerous chronic inflammations of the skin. Several practitioners restrict the measure of abstracting blood, in affections of the skin, to cases occurring in the strong and lusty, or in subjects of a sanguine or bilious constitution. For myself I declare that I have repeatedly had recourse to bloodletting, with the greatest advantage, even when it seemed to be contra-indicated by the general state of the patient, particularly in elderly persons suffering from sleeplessness caused by prurigos, lichens, and eczemas, that had resisted all other treatment. Avicenna long ago recommended the same practice.

In chronic states of inflammation of the skin, the blood is commonly buffy, even in the aged. This condition of the circulating fluid ought to be taken into account, as its appearance might incline us to recur to bloodletting oftener than is really necessary; and we must be very guarded not to change this state of the blood too rapidly by the repeated use of the lancet; the constitution of the patient would inevitably suffer: and farther, as I have frequently had occasion to observe, the blood becoming more and more serous, might, nevertheless, preserve its disposition to coagulate with the buffy coat, and thus lead to serious mistakes. In general, the bleedings ought not to be repeated but at somewhat distant intervals, once a month for instance, and at the periods of menstruation in females labouring under the skin complaints, which have been preceded by amenorrhœa or dysmenorrhœa.” 66.

General as well as local bleedings by means of cupping, or of leeches applied near to the affected parts, having had the happiest effects in the treatment of many cases of Eczema, Impetigo, Psoriasis, Herpes and Prurigo. It is generally proper, to repeat the local abstraction of blood in young subjects, as often as the inflammation shews a disposition to extend, or is accompanied with much heat, or pain; and even in the case of elderly persons, the same treatment will be found to be the most simple and efficacious, provided their constitutions be moderately vigorous and healthy.

The use at the same time of the simple hot air or vapour bath, twice, or thrice a week, will often dissipate cutaneous diseases, which have obstinately resisted tedious courses of internal remedies.

A very prevalent error has long existed among medical men, and more especially among those of our own country, of supposing that most protracted cases of cutaneous disease, are always associated with, if not actually dependent upon, some disturbance of the chylopoietic viscera. Hence the almost constant resort to the use of purgatives, alteratives, stomachics, &c. on the very vague principle of correcting the state of the stomach and bowels. We have the authority of Rayer in stating that, in individuals attacked with chronic inflammations of the skin, the digestive apparatus is very commonly quite healthy; an observation, the truth of which the experience of most practical men, we are inclined to think, will confirm.

For many years after the appearance of Dr. Hamilton's book on Purgatives, almost every cutaneous disease was referred to disordered states of the

bowels, and the treatment universally adopted, was the use of powerful and repeated doses of purging medicines.

This practice seems to have been as common in France, as in this country, and has there been known under the title of "Hamilton's Method," although, strange to say, there is no mention of cutaneous diseases, with the exception of one or two of the febrile exanthemata, in any part of his book. We must therefore wholly exculpate the admirable author himself, from the charge we have made. It is quite true, that the use of mild aperients or laxatives is almost always proper, if the bowels do not act regularly of themselves. Weak infusions of rhubarb, sweetened with manna, the different saline purgatives, as the sulphates of soda, of potash, and of magnesia, the tartrate of potash and soda, the sulphate of potash with sulphur, in the dose of one, or two drachms, in a large quantity of water, are perhaps the most advisable. There is one medicine of this class, which has been long and most extensively used in almost every form of cutaneous disease, and is certainly of singular efficacy in many cases, probably from its exerting an effect upon the surface of the body, as well as upon the intestinal canal; we allude to sulphur. It may be administered either alone, or in combination with a saline aperient, or with an alkali, as the carbonate of soda, or of potash. Dr. Green is of opinion that it has been usually exhibited in too large doses. "In very small doses," he says; "and under circumstances favourable to its exhibition, it has in my hands proved a most valuable alterative, and most gentle, but efficient diaphoretic." In most cutaneous diseases, in which the internal use of sulphur is advisable, the simultaneous employment of it, in the form of vapour, or of lotion and ointment to the skin, will be found highly efficacious. The sulphurets of potash, soda, and lime are convenient forms for the preparation of artificial sulphureous waters, either for internal, or external administration. From half a pound to a pound of one of these sulphurets added to about thirty gallons of water, makes a "sulphureous water, or artificial Barré's bath;" and a "sulphureo-gelatinous bath" is prepared by dissolving from two to four ounces of the sulphuret in thirty gallons of water, and adding to the solution one or two pounds of isinglass previously dissolved in boiling water.

"This bath is preferable to the artificial Barré's bath, as it is neither irritating, nor apt to occasion feverishness, which the common sulphureous water bath is.

A cheaper and not less efficacious gelatine may be procured by dissolving from ℥iiss. to ℥iij. of parchment clippings in water, by long boiling, or by using a neat's or calf's feet for the purpose." 352.

The different preparations of the alkalis and of some of the earths have been generally esteemed highly useful in the treatment of cutaneous diseases. The liquor potassæ and lime-water were much valued by Dr. Wilson, against the squamous diseases in particular; and the subcarbonates of soda and of potassa have always been justly praised, as admirable adjuvants to the action of sulphur. Ammonia and its carbonate may be frequently employed with the greatest advantage, especially in diseases presumed to be of a syphilitic nature, and whenever the general powers of the system are much enfeebled. In Prurigo, when it occurs in weakened constitutions, the internal use of ammonia alone, or combined with a bitter infusion, is some-

times of singular efficacy.* Alkaline baths and washes are easily prepared, and are remedies of great utility. From four to eight ounces of the sub-carbonate of potass, added to thirty gallons of water, form a bath which is very useful in promoting desquamation from the skin, and in allaying Pruritus of obstinate Lepra and Psoriasis; and a convenient lotion may be prepared, by adding from one to two drachms of liquor potassæ to an ounce of rose-water.

The acids, are perhaps, more frequently useful in cutaneous diseases than even the alkalis. The mineral acids, indeed, are among the safest and the most potent remedies which we possess against these maladies; and each of them appears to have properties peculiar to itself, and hence to be better adapted than the rest against certain orders of these. Thus, the diluted sulphuric acid, in doses of from ten drops to a drachm three times a day, has long been recommended in cases of ulcerated Eczema, and of the severe kinds of Lichen; while the nitric acid has been supposed to be more useful in Impetigo and Pityriasis, not to mention its effects in the various forms of secondary syphilitic disease. The nitro-muriatic acid bath, prepared by adding three ounces of the nitric acid, and one ounce of the muriatic, to an ordinary tepid bath (which should then be about as sour as distilled vinegar), is of decided efficacy in numerous cases of obstinate skin disease. The acetic acid, diluted with water, is recommended by Hippocrates in various affections of the skin; and, of late years, Mr. Wilkinson has again brought it into use against Lepra and Lichen. The hydrocyanic acid is extremely useful in allaying the pain and irritation of Impetigo, and in many scaly affections, attended with severe itching, or a wash, prepared by adding one or two drachms of it to six ounces of rose-water. The addition of some liquor plumbi, &c. may be made, according to circumstances.

So much for certain classes of medicinal agents. We shall now make a few practical remarks on certain remedies, whose mode of action is certainly not well understood, and which, although of singular efficacy in some of the most obstinate skin diseases, are, it must be confessed, very generally exhibited on mere empirical principles; for example, mercury, iodine, and arsenic, &c. Well may Rayer say, that the preparations of mercury are universally employed in cutaneous affections, both internally and externally. From the common Tooth-gum of infants, to the frightful horrors of Lepra and Elephantiasis, every disease has been made to pass through the ordeal of mercurialization.

The preparations of this mineral, which have been most extensively used, are its proto-chloride and deuto-chloride (calomel and corrosive sublimate).

"The action or *modus operandi* of alkaline remedies in cutaneous disease, has not hitherto been examined with the attention which the subject deserves. One very important effect of their use is the increase in the flow, and the change in the quality of the urinary secretion, which is very generally more or less disturbed in all cases of protracted cutaneous disease. The morbid sympathies between the skin and the kidneys, and the therapeutic indications derivable from a knowledge of these sympathies, have often been noticed. It is well known that, in the calculous diathesis, the state of the skin is seldom quite healthy, and, on the other hand, that, in cutaneous diseases, the urine is generally very offensive.

It is almost unnecessary to enlarge upon their well-known therapeutic effects.

"I believe (says Rayer) myself to have been one of the first who observed that the white precipitate (calomel obtained by precipitation), mixed with lard in the proportion of a drachm to an ounce of grease, applied in frictions to the affected parts in the quantity of one, two, or three drachms daily, exerts a specific power over two forms of squamous inflammation, namely, lepra and psoriasis. I never saw these frictions followed by salivation, which is so frequent a consequence of the internal exhibition, even in very small doses, of calomel prepared in the ordinary way. In this respect, therefore, there is an actual difference between an ointment of precipitated calomel and the common blue or mercurial ointment, the action of which on the salivary glands is constantly the same. I have seen patients labouring under old and inveterate psoriasis use half a pound of precipitated calomel by way of friction, without their mouths becoming in the slightest degree affected, and obtain a perfect cure." 77.

Sublimate baths, prepared by dissolving from two to four drachms of the oxymuriate in thirty gallons of water, have been used with advantage at the Hôpital des Veneriens, at Paris, by M. Ricord and others. Rayer says:—"I have many times prescribed these baths, and have never seen salivation follow their use; but their good effects have also often appeared to me to be very questionable." We are not aware of their having been used in this country, nor is it likely that they ever will be so extensively. On the other hand, mercurial fumigations have been much more used in this country than on the Continent, in many parts of which, especially in Germany, they are as yet scarcely known.

"The mercurial preparation commonly used in the fumigating apparatus is the cinnabar or red-sulphuret; the proto-chloruret or calomel is also occasionally employed, but both of these are inferior in efficacy, I am inclined to believe, to the grey oxide; this has the great and obvious advantage, at all events, of not making patients cough, should a little of its vapour be breathed accidentally whilst they are shut up in the apparatus. The system is very readily and rapidly brought under the influence of mercury by means of the fumes of the grey oxide administered in a proper apparatus, even after all other modes of accomplishing this end have been tried and found unavailing." 304.

Within the last few years, the iodates or iodurets, and the cyanuret of mercury, have been strongly recommended in some cutaneous affections, especially when these occur in scrofulous constitutions. Iodine and its multifarious preparations and combinations have, it is well known, acquired so great renown in the cure of numerous forms of disease occurring in strumous patients, that "it has been energetically characterized as 'la bataille d'Austerlitz des Scrofules' by one of its most distinguished and able advocates in France, so completely does it rout them."

The only other heroic remedies to which we shall at present allude is arsenic. In obstinate cases of Lichen, Prurigo, and especially of Lepra, and other forms of scaly disease, arsenic has been found to exert the most powerfully curative effects. Certain chronic and obstinate forms of Eczema of the scrotum, margin of the anus and labia are, of all the vesicular inflammations, those in which arsenical medicines are most frequently and successfully employed. Cases of Lepra, which had lasted for fourteen, and even twenty years, and which had most obstinately resisted all other remedial means, have been cured by the administration of from three to twelve,

or even twenty drops of Fowler's arsenical solution, taken three times daily. Its use must be continued for six or eight weeks, or even for three months, before we can hope to accomplish a radical and permanent cure of the evil, in such inveterate cases. True it is that, not unfrequently, it requires to be discontinued for a time, in consequence of the disagreeable effects which it is apt to induce. Pains in the chest and bowels, sickness, vomitings, fainting, and extreme anxiety at the præcordia, accompanied with quickening of the pulse, nervous tremblings, diarrhœa, oppression of the breathing, the sensation of tingling in various parts of the surface, which, at the same time, not unfrequently exhibits an erythematous or vesicular eruption, are very common effects of the internal use of arsenical preparations.

A very common result is, itching and pain of the eyes—the eyelids, especially the lower ones, becoming puffed, and surrounded by livid circles.* Whenever these symptoms occur, the remedy ought to be discontinued for a time, and resumed when they have ceased. M. Rayer says, that arsenical preparations have been known to induce paralysis and wasting of the genital organs. He alludes to three such cases, which have occurred in his own practice. In this respect it resembles iodine, which, it has been very generally believed, exerts in certain constitutions a very peculiar effect on the testis of the male, and on the mammæ of the female. A certain degree of analogy between the effects of arsenic and of mercury is also occasionally witnessed; both of these points induce, in certain states of the system, a vesicular eruption on the body, not to mention the resemblance between the constitutional disturbances which so frequently follow the use of them.

The action of iodine is, in many respects, very similar to that of mercury. They are used advantageously in the same classes of disease, and iodine, it has been frequently remarked, induces salivation like mercury. The circumstance of these three very active drugs appearing to agree, at least to a certain extent, in the effects which they produce on the system, may lead us probably to form a rational conjecture as to their *modus operandi* in disease, and thus to obtain some safe indications as to their use. According to our view of the subject, they are all excitants of the capillary vessels, as is shewn by the feverishness of the system, by the heat and irritation of the surface, and the other symptoms which not unfrequently follow their lengthened employment. It is in consequence of this action on the extreme vessels that they act so beneficially, not only in most chronic cutaneous diseases, but also in many others, which are accompanied with languor of the capillary circulation, and diminution or perversion of the nervous energies; as in Agues, Chronic Rheumatism, Paralysis, Neuralgia, &c. &c. The practical rule, therefore, which we should prescribe for their exhibition is simply this, that in all acute forms of cutaneous disease they should not be used; (an exception, to a certain extent, must, it is true, be made in favour of mercury;) and, on the other hand, that the cases which are most likely to be benefited by them, are those where the evil has existed long after all inflammatory symptoms have disappeared, and where it seems to be kept up

*The urine has been known to acquire a jaundiced appearance from the long use of arsenic.

by a morbid action of the skin itself, independent of any constitutional derangement of the health.

The admirable effects of arsenic in old cases of *Lepra*, *Lichen*, &c. and of mercury against all the syphiloid affections of the skin, have been long known and appreciated. Of late years, iodine and some of its preparations, especially the hydriodate of potash, have been found of very considerable efficacy in both these classes of diseases, as well as in Chronic Rheumatism, Paralysis, &c.

The few hints which we have thrown out may possibly be of use to the young practitioner in directing his practice in cases, which hitherto he has treated empirically, and, as it were, with a mere random aim.

Having thus briefly alluded to the principles which ought to direct our treatment of cutaneous diseases, and specified the most potent and generally useful of the remedies which the healing art affords, we shall now proceed to take a rapid survey of some of the most interesting orders of this class of maladies, the consideration of which was omitted in our previous review of Rayer's work, commenting on their most remarkable features, and more especially on their therapeutic treatment.

The classification which we shall follow is that adopted, with very slight modifications, by Dr. Green from his French contemporary; for in the arrangement, as well as in the descriptions of individual diseases, Dr. G. has drawn largely from the ample stores of Rayer's Treatise, the contents indeed of which constitute a complete encyclopædical history of whatever is known of Dermatology.

The following is the tabular view which Dr. G. has given.

Forms of Inflammation of the Skin, and Dis- eases which appear under these severally.	{	EXANTHEMATA: Erythema, Erysipelas, Roseola, Ru- beola, Scarlatina, Urticaria.
		VESICULÆ: Miliaria, Herpes, Scabies, Eczema.
		BULLÆ: Pemphigus, Rupia.
		PUSTULÆ: Variola, (including Varicella,) Vaccina, Ecthyma, Impetigo, Porrigo, Acne, Mentagra.
		PAPULÆ: Strophulus, Lichen, Prurigo.
		SQUAMÆ: Pityriasis, Psoriasis, Lepra.
		TUBERCULA: Lupus, Elephantiasis Græca, Cancer, Molluscum, Frambœsia.
	{	FURUNCULI: Furunculus, Anthrax, Pustula Maligna.
Diseases which appear with the elementary characters of almost all of the above or- ders.	{	Syphilis.
Diseases which are se- verally types of new and additional or- ders.	{	Pellagra.
		Purpura.
		Elephantiasis Arabica.
		Cheloidea, (Keloide, Alib.)
Original or accidental unusual states of the skin, not referable to Inflammation.	{	ACHROA: Leucopathia, (Albinismus,) Vitiligo.
		DISCHROA (MACULÆ, Willan): Lentigo, Ephelis, Chloasma, Nævus.

Diseases of the appen- dages of the skin; more properly of the parts which secrete and support these."	}	Epidermis—Ichthyosis. Ungues—Onychia. Pili—Plica.
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As we have already expressed our opinions in a former number of the merits and demerits of Rayer's classification, we deem it unnecessary to enlarge upon this subject. No one now thinks of arranging with Willan Erysipelas among the bullæ, or Purpura among the exanthemata; and certainly some of the diseases grouped together under Willan's order of Tubercula are most dissimilar in all their essential characters. The close affinity between the genuine Variola, Varicella, and Vaccina, requires that these diseases should be brought together, and not separated, by one being placed among the pustulæ, and the other two among the vesiculæ. (In our former review we suggested the propriety of establishing a vesiculo-pustular order of skin-diseases, in which all the disputed members—we mean such diseases as are truly vesicular at their commencement, and which become pustular only during their progress, might be conveniently inserted. Our subsequent reflection has confirmed our opinion as to the propriety of such an arrangement.)—*Rev.*

Rayer, although sensible of these and some other defects of Willan's classification, bears a generous testimony to the surpassing merits of the English physician. The passage is altogether so honourable alike to the eulogized and the eulogist, and conveys so salutary an example for imitation to authors of both countries, that we cannot deny ourselves the pleasure of transferring it entire to our pages.

"The great characteristics of Willan's writings are the impress they bear of the scientific spirit that guided him in his researches; the great precision, and the purity of his descriptions; the particular pains he takes to select well, and to use judiciously, his technical expressions; lastly, the taste and the sound judgment he displays in his interpretation of the ancients. If there be ought with which he is chargeable in the way of omission, it is with having paid too little attention to the relations of the diseases of the skin to the state of the constitution, to anterior diseases, and to those affections which are attributed to their repercussion. His therapeia is in general active; his practice, his writings, and the works which have issued from his school, contributed powerfully to extend the free use of purgatives, and the internal employment of a variety of powerful medicines, such as the tincture of cantharides, the mineral acids, and the preparations both of antimony and arsenic in the treatment of cutaneous affections." *Introd. lii.*

The EXANTHEMATA are characterised by a diffuse inflammation of the skin in small or large patches, terminating in a separation of the epidermis in scales, which are sometimes so minute as to be almost imperceptible. The chief danger of this class of cutaneous diseases is, the occasional complication of the evil extending to the pulmonary, or gastro-enteric mucous membrane. More rarely there is a tendency to cephalic disturbance. In all cases, therefore, of serious exanthematous disease, it is very necessary to ascertain the state of these important organs.

"In the exanthemata, the limits of the dermis and vascular rete are much more easily demonstrated than on the healthy skin; a simple incision through the substance of the skin is enough to exhibit these two layers; it is then, in

truth, as M. Gendrin well observes, if at any time, that we must be induced to conclude that the vascular reticulation and the dermis form two distinct and superposed membranes. When the inflammation has run high, the vascular rete is of a red, and even of a brownish colour, as in erythema nodosum, rubeola nigra, and gangrenous erysipelas; a certain quantity of blood then appears to be extravasated into the tissue of the skin." 100.

The description of erythema and its varieties given by Rayer is full of interest and instruction.

The evanescent forms of the disease ally it very closely to Roseola; and its well-known affinity to Erysipelas needs not to be pointed out.

Under the head of Erythema, Dr. Green has noticed the *novel* epidemic disease to which the French authors have given the name of *Acrodynia*. It was first observed in June 1828 at the Hospice de Maria Therese at Paris, and soon afterwards in various parts of the city. The troops in the different barracks suffered severely from it: in one, 560 out of 700 soldiers were attacked with it. During the following Winter it abated; but returned in the Spring; and finally appeared to become quite extinct in the Winter of 1829-30. The symptoms of Acrodynia were as follow. Generally after some feverish disturbance of the system, "the skin of the palms of the hands and soles of the feet presented, often from the invasion of the disease, a red colour which frequently extended along their edges to other parts of the body, to the legs more especially, in the shape of patches of various shades of red, sometimes very similar to ecchymoses. Pretty frequently, too, the skin assumed a blackish or brown appearance as if it had been rubbed over with soot, this happened more particularly on the abdomen, neck, and about the bends of the joints; it very rarely happened that this discoloration extended to the face."

In many cases, numerous pustules, phlyctenæ, and even boils, appeared on the hands and feet, and sometimes the corpus mucosum was laid completely bare in various parts, when the process of desquamation, assisted by the profuse local sweats, commenced. The patient was much distressed with a sense of cold followed by one of burning heat, of numbness, tingling, or even sharp shooting pains in the hands and feet, more especially in the latter, extending up the limbs, but always more severe at the extremities than elsewhere, so that the slightest pressure on them caused severe pain. In a few cases, these parts were affected with complete paralysis, accompanied with contraction and wasting of the limbs. The duration of this singular disease varied from a few weeks to several months. It rarely proved fatal, except among the old and infirm. Its probable cause was very obscure. Some attributed it to the use of unwholesome food, others to a peculiar unhealthiness of the atmosphere; but it was observed to prevail in the cleanest and best supplied barracks, more than in the hovels of the ill-fed poor. It did not appear to be contagious.

"The disease was viewed variously as rheumatic in its nature, as an inflammation of the skin and mucous membranes, as the effect of a peculiar lesion of the nervous system, especially of the spinal marrow, lastly, as a new disease.

Diagnosis. Pellagra of all known diseases is that with which acrodynia has the greatest analogy; both are characterized by a triple manifestation of cutaneous symptoms, of gastro-intestinal symptoms, and of nervous symptoms, the similarity of which is certainly striking. (vide *Pellagra*.) In several epidemics attributed to indifferent qualities of the cerealia, to spurred rye, &c., the

greater number of the symptoms of acrodynia will also be found noted, such as tinglings and numbness of the feet and hands, amounting sometimes to paralysis, contraction of the fingers, cramps of the legs, swelling of the feet, phlyctenæ on these parts, &c. These epidemics, like that of Paris of 1828, also occurred in cold and moist summers." 1178.

The treatment of Acrodynia was certainly very unsatisfactory; for generally, in spite of all kinds of remedies, its progress was very slow to recovery. Reference is made by Rayer to all the best memoirs on this disease; and in the excellent description which he has given of that pest of the fair plains of Italy, the Pellagra, he has pointed out the analogies which may be traced between it and the Parisian epidemic.

In some parts of Spain, and especially in the Asturias, the "Mal de Rosa," a cognate disease to the Pellagra, is not unfrequently prevalent.

The treatment of Erythema, at least of its more common varieties, is sufficiently well understood by every well-educated medical man. After Erythema, we may introduce Roseola; the two diseases, in several of their forms, meeting and running into each other. "Let but erythema," says Rayer, "become somewhat more general than wont, and its spots appear a little more prominent, or the patches of roseola, from some unusual violence of the accompanying inflammation, become particularly prominent, and the appearances of these two exanthemata are the same."

The affinity between some of the forms of Roseola and Urticaria is very striking. Both are very often induced by slight derangements of the digestive system, as by certain articles of food, which disagree with the stomach. The diagnosis of Roseola is chiefly important, during the prevalence of Measles, or of Scarlet Fever, as the error of mistaking it for either of these diseases, has been often committed, and has thus led to the belief that a second attack of Measles and Scarlatina is not unfrequent.

The exciting causes of this exanthem are various. The heat of Summer weather, the irritation of dentition, the inoculation of the variolous and vaccine lymphæ, and indeed the feverish disturbance of the system, from whatever cause, very often induce an eruption of roseolous inflammation on different parts of the surface. A roseolous or erythematous form of efflorescence is sometimes connected with attacks of Gout and Acute Rheumatism. Some of the German authors have described this variety under the title of Pelliosis Rheumatica.

It appears to be unusually common at Wurzburg, where rheumatic affections are almost endemic and frequently fatal, from their being complicated with Miliaria.

In the 33rd vol. of the Edin. Med. and Surg. Journal, Dr. Cock has minutely described, an "Epidemic Eruptive Rheumatic Fever" which he saw in the West Indies.

During the prevalence of the Asiatic Cholera in France and England, two years ago, a Roseolous Eruption was observed in several of the patients, when the period of re-action had set in. In some cases, it resembled the efflorescence of Scarlatina, in others, it had more of the appearance of the rash of Rubeola, or of Urticaria.

In the description given by Rayer of Erysipelas he alludes to its supposed occasional contagiousness.

He is rather inclined to the negative opinion, and attributes the spreading

of the disease in certain seasons and places to epidemic influences, or states of the atmosphere, the nature of which is not yet understood. Dr. Tweedie on the other hand is quite convinced of the occasional contagiousness of Erysipelas: he says

“When we find persons who, after becoming infected apparently from attendance on erysipelatous patients, remove as soon as they become ill to another residence at some distance, and communicate the disease to the family, the irresistible conclusion is, that erysipelas in such cases has been communicated by contagion.” 110.

The blood in cases of Erysipelas is sometimes quite as pertinaciously buffy, as in acute Rheumatism. The desquamation of the cuticle, after severe erysipelatous inflammation, takes place generally in large flakes. Mr. Wilson, the late Lecturer on Anatomy in London used to mention the case of a patient who was subject to attacks of Erysipelas, at the end of which the cuticle of the hands and feet was detached in the form of a glove. The characters of erysipelatous inflammation are considerably modified by the peculiar structure of the parts affected. When it affects the hairy scalp, it is almost always of that kind, which has been called Phlegmonous Erysipelas, in which the subcutaneous cellular texture, as well as the skin itself, is involved, and in which the attack is often of alarming severity.

“If this disease be left to itself, shivering fits at irregular intervals supervene, and the patient falls into a state of coma. The inflamed skin becomes thin in parts, bursts, and gives vent to a quantity of pus and of shreds of cellular membrane and of the occipito-frontal aponeurosis in a gangrenous state. The scalp is almost never stricken with gangrene; being, according to the judicious remark of M. Dupuytren, furnished with blood vessels which are independent of those that are distributed to the pericranial cellular substance. On the following days new openings are formed in the most depending parts near the centre of the erysipelas, and additional shreds of cellular membrane and of aponeurosis are detached; the discharge is abundant and offensive, the bones of the cranium are sometimes exposed, and if the disease be not checked in its progress, delirium, diarrhoea, and various other serious symptoms give warning of the approach of death.” 127.

The Erysipelas of the umbilical region and genital organs, principally observed among the new-born infants in hospitals, has a marked tendency to terminate in gangrene. It is frequently complicated with peritoneal inflammation, and with umbilical phlebitis. The causes of this species are not well understood. Injury of the umbilical cord, bad food, unwholesome air, have appeared to induce it. Erysipelas of the scrotum and prepuce occurring in elderly persons often ends in gangrene. Dr. Tweedie observes—

“Of protracted cases of malignant fever especially, it (Erysipelas) is a frequent consequence; and we have occasionally observed that the inflammation commenced and was confined entirely to the throat: more generally, however, the inflammation, after beginning in the throat, has spread from the mouth to the cheek and face, or through the nostrils to the nose, and thus erysipelas has been propagated to the face and head. When this form of pharyngeal inflammation is confined to the throat, it appears to us to be in some measure allied to the *Diphtherite*, of which Bretonneau has given an excellent description. There is, however, no pellicular or membranous exudation, which forms the characteristic distinction of diphtherite—indeed, in several fatal cases, in which this pharyngeal inflammation was combined with erysipelas of the face and head, we have found scarcely any traces of the previous existence of inflammation.” 108.

With respect to the immediate etiology or proximate cause of Erysipelas, M. Ribes has lately announced, as the result of his pathological examinations, that the internal tunic of the veins and arteries of the integuments is inflamed, and that the disease principally attacks the small cutaneous veins, the small arteries being less affected. Probably Rayer is more correct in his suspicions. Describing a case of Erysipelas of the face, which proved fatal, he states—

"The subcutaneous and intermuscular cellular tissue of the face was infiltrated by a yellowish sero-purulent fluid; small abscesses, containing laudable pus, existed in front of, and behind, the orbiculares palpebrarum muscles, among the cellular tissue of the orbit, and extended towards the temporal fossæ; the cellular substance of the scalp itself was also infiltrated. The parietes of the veins of the face and neck, although lying bathed in pus, showed no trace of inflammation. Many of these minute vessels contained purulent serum similar to that effused into the inflamed cellular membrane. The minute arteries were healthy. I have also found pus in the lymphatic vessels of a lower limb attacked with phlegmonous erysipelas, without any visible alteration of the parietes of the blood-vessels. In fine, I have met with true inflammation of the principal veins in limbs that were the seat of phlegmonous erysipelas or of simple phlegmon, and as a consequence of paronychia or of amputation. If I may be allowed to draw a conclusion from my own experience, I should say, that phlebitis complicates inflammation of the cellular tissue more frequently than that of the skin." 129.

As to the prognosis we may state generally, that deep and extensive Erysipelas of the limbs, that diffuse and wandering Erysipelas, and that the sudden and spontaneous disappearance of the cutaneous affection, occurring during the course of chronic diseases, are always of very serious import. Whenever there is reason to believe that the disease is complicated with Phlebitis, it is almost always fatal. The treatment of Erysipelas inculcated by M. Rayer is most praiseworthy.

It may be styled truly "British," for its activity and decision. Blood-letting is by far the most powerful remedy in all cases of the acute form, when the constitutional symptoms run high. While he admits the utility of the tartar-emetic medication, he distinctly affirms the superiority of blood-letting in the majority of cases. The precept of the Scotch maxim, "baith's best," will be followed by the judicious practitioner. The application of mercurial ointment to the inflamed surface, is, according to Rayer's experience, utterly useless. Simple lard is quite as effectual. Flour and other dry powders, so generally applied some years ago in Erysipelas, are not to be recommended. The results of several trials by M. R. to stop the progress of Erysipelas by the superficial emuteration with the nitrate of silver, have not been at all uniformly favorable. This remedy has been in our possession of great utility in several of the forms of Erysipelas; not only in the common cutaneous form, where the disease is limited to the more dermoid integuments, but in that more deep-seated form where the subjacent parts are involved. We are confident that in many cases, the termination of the latter form in suppuration and gangrene has been prevented by the free application of the nitrate to the affected integuments. In severe cases, the caustic may be applied to the entire surface of an extremity. This remedy is totally opposed to blistering the inflamed parts, as recommended by Lempriere and other French surgeons. Intermittent Erysipelas is a very

rare disease. Rayer has seen it in the face, associated with Neuralgia of the affected part. Both diseases were cured at the same time by the quinine. Compression is proper only in Œdematous Erysipelas, or when the severity of the inflammatory action has been already subdued. The admirable effects of free incisions in severe cases of Phlegmonous Erysipelas affecting the scalp and limbs, cannot be gainsayed by any practical surgeon.

"The more indolent and lingering forms of erysipelas, especially of the lower limbs, attended with much œdematous swelling, are always greatly benefited by the hot air, and still more by the sulphur fume bath. The disposition to attacks of this kind exhibited by some individuals, may be got rid of entirely by the occasional use of this means."—*Green*, 40.

Urticaria. Rayer has shewn great judgment in consolidating the six species of Willan, viz. *U. febrilis*, *evanida*, *perstans*, *conferta*, *subcutanea*, and *tuberosa*, into two—the acute and chronic, according to the circumstances of the case. *Urticaria* is a troublesome, but seldom or never a dangerous disease. It has been known to be associated with Agues, and then it has appeared to be epidemical. It is one of the cutaneous affections which belong to the class of "rheumatic eruptive fevers."

In the treatment of acute *Urticaria*, it may be asserted positively that, whenever it does not promptly yield to an emetic or cooling purgative, the detraction of blood will be found most serviceable. In the more severe form, which has been denominated *U. tuberosa*, from the size, depth, and hardness of the wheals, the blood, Rayer says, is usually in a buffy state. The chronic forms require the persevering use of mild alteratives and tonics. The mineral acids are among the best. Before leaving the exanthemata, we shall briefly allude to two topics in the history of *Scarlatina*.

It is well known that Hahnemann, several years ago, announced that belladonna, taken internally, was a powerful preservative against the attacks of this disease. He has succeeded in convincing very many of his own countrymen, and also a few of the French doctors, of the truth of this grand discovery! A host of *well-authenticated* and *most indisputable* cases have been published in consequence; but all this evidence does not appear to have satisfied the incredulous minds of British physicians. Rayer contents himself with merely chronicling the opinions of others, and does not state his own. From this, we may fairly infer that he is still a sceptic. Dr. Green is more easily satisfied; but we fear that his authority will have little weight, especially as he confesses that he has had only one opportunity of witnessing the prophylactic powers of belladonna. "Among the children of a boarding-school, where *Scarlatina* had broken out, four, to whom the medicine was administered, escaped the disease entirely." Most conclusive evidence! Dr. G. has followed his Continental authorities too implicitly on this occasion.* The formula recommended is, to dissolve 6 or 10 grains of the extract in an ounce of water, and to give from 5 to 20 drops of this solution three or four times a day. The *modus operandi* is, *as a matter of course*, beautifully illustrative of homœopathic principles! It excites a disease in all respects similar to *Scarlatina*. The following case, from Rayer, may be adduced as an example of its effects on the skin.

* Dr. Tweedie, in his able description of *Scarlatina*, in the *Cyclopædia*, is less

"M. N. forty-six years of age, having at four o'clock in the morning taken forty-four grains of belladonna, was seized about an hour afterwards with supra-orbital head-ache of the most violent description, and excessive redness of the skin, which first appeared about the eyes and face, and then extended to the whole of the integuments. Within a few minutes the entire surface of the body presented a uniform red tint, exactly similar to that observed in scarlatina; the throat of the patient was also intensely red, and affected with heat, which seemed to be propagated through the whole course of the alimentary canal. Another remarkable symptom was this: that the urinary passages, and especially the neck of the bladder, became extremely painful. The patient, in the midst of his delirium, was perpetually asking for the *pot de chambre*, and it was with difficulty that he succeeded each time in passing a few drops of red and bloody urine. All these distressing symptoms were relieved by a copious bleeding, demulcent drinks, soothing glysters, and the application of leeches." 205.

The other topic deserving our attention is the occurrence of dropsical affections, so frequent during the decline of Scarlet Fever. Rayer is inclined to agree with many English physicians, in regarding these attacks as generally inflammatory in their origin, and, therefore, as requiring the use of antiphlogistic remedies for their cure. The pathological history of this variety of dropsy has not, hitherto, been well ascertained.

"Blackall and, more recently, M. Peischer, have shown that the urine was often albuminous during the continuance of the anasarca; and there is enough in these scattered remarks, when united, to make us enquire whether this species of anasarca be not really a variety of the dropsical affection lately made known by Dr. Bright, which Drs. Gregory and Christison have done so much to illustrate by new facts, and in the investigation of which I have myself spent some time.* In fact, like the disease described by Dr. Bright, the anasarca of scarlatina is almost always produced by exposure to cold and moisture. On the invasion of both diseases, a particular change in the qualities of the urine is often observed; this fluid becomes brown in colour, albuminous, and loaded with cruor. Both are very formidable affections; they both, occasionally, end in hydrothorax, and in hydrocephalus, and are very different from those passing dropsies proceeding from some obstruction to the current of the blood, the mechanism of which M. Bouillaud has so well explained. I have never had an opportunity of examining the organs, and particularly the kidneys, of an individual who has died from anasarca following scarlet-fever, although I have very frequently had such opportunities in reference to the disease described by Dr. Gregory; but there is during life, so perfect an identity in the phenomena of these two diseases, that post-mortem examination would, most probably, show them to be of the same nature." 171.

The most approved treatment consists in the use of bloodletting, if the patient's constitution warrants such a measure, and of repeated warm baths, and in the administration of calomel, of the acetate of potash, and other diuretics. Dr. Green says—

"Should symptoms of anasarca appear during convalescence, their progress may be almost certainly arrested by the use of the vapour-bath. Besides being

believing:—"We certainly (says he) profess ourselves sceptical as to the powers (preservative) ascribed to belladonna."

* Tissot, *De l'Hydropisie produite par l'Affection granuleuse des Reins*. Paris, 1833, 4to.

the most effectual and speedy means of checking this frequent and unpleasant attendant upon convalescence from scarlatina, the vapour-bath has the advantage of not only not retarding the patient's ultimate recovery, as all the other curative measures usually enforced necessarily do, but even of accelerating it. 61.

Bullæ. Rayer in the present edition of this work, appears to have followed the advice which we gave him last year, in reference to the impropriety of transferring *Zona* from the order of *Vesiculæ* to that of the *Bullæ*. The passage, in our Number for October last runs thus :—

“With respect to *Zona*, we have no doubt in saying that Rayer is wrong, when he places it among the *bullæ*: it is most decidedly a vesiculous disease; and a critical reader cannot fail to be surprised at finding the author himself admitting that ‘*Zona*, indeed, really differs from the *Herpes Phlyctenoides* only in the singular form it assumes,’ as its very name imports; for, whatever be its seat, ‘*Zona* shews itself under the form of a semicircular band, of more or less extent, covering part of the trunk, or of a limb.’ Perhaps it would be strictly more correct to designate *Rupia* and *Zona* as bullo-vesiculous, than as simply bullous or vesiculous diseases.”

The following passage, from Rayer, expresses the same sentiments.

“When herpes zoster or *zona*, has attained its complete developement, it very frequently appears with the characters of a *vesiculo-bullous* inflammation, which seems to form the link of connexion between bullous and vesicular diseases. Willan assigned this disease its true place among the *herpetes*, and I committed an error when I removed it from that group in the first edition of this work.” 206.

If Rayer and other dermatologists would apply to other portions of their classification, the principle which we have urged, of applying compound epithets, as *vesiculo-bullous*, *vesiculo-pustulous*, to certain groupes of cutaneous diseases, instead of separating the members of these groupes from one another, and placing them in different orders, we are satisfied that their arrangement, would be not only more natural, but also more practically useful to the student of medicine. Perhaps the only genuine bullous disease is *Pemphigus*, including the *Pompholix* of Willan. The other genus *Rupia*, admitted by Rayer, has a very questionable right to be classified with it. The eruption of the former disease has more of the vesiculous or even of the pustulous, than of the bullous characters, for the *bullæ* are described as being usually “small, flattened, and as containing a fluid, which if not sanious, or purulent from the commencement, very quickly becomes so.” The marked resemblance between many of its features, and those of *Ecthyma Cachecticum*, has been noticed by most authors, and indeed Mr. Plumbe has classified them together. The remarks of Rayer on this topic will be read with advantage.

“*Rupia* differs from *ecthyma* in its primary form, which is bullous, whilst that of *ecthyma* is pustular; the base of the pustules of *ecthyma* is much inflamed, and the scabs with which they become covered at a later stage of their progress, are hard, and, as it were, set or incased within the substance of the skin; the circumference of the *bullæ* of *rupia* does not present the same degree of inflammation, and their incrustations are much broader, more prominent, and less adherent than those of *ecthyma*. It must be allowed, however, that the *bullæ* of *rupia* become purulent very quickly, and that occasionally the diagnosis is rendered so much the more difficult, as the two eruptions are met with at one time in the same individual. Nevertheless, the prominent incrustations, and the deep, and often intractable ulcers of *rupia* are very different from the impacted scabs and slighter sores of *ecthyma*.” 234.

Both diseases indicate a cachectic state of the constitution, and require for

their successful treatment, the use of a generous diet, tonics, alteratives, &c. and residence in a pure air. The sulphur fume bath, or the artificial sulphureous water bath, made by adding three or four ounces of the sulphuret of potash to a common tepid bath will be found of great service, by stimulating the cutaneous surface, and improving the general health. The local treatment recommended by Rayer is

"After the fall of the scabs in *rupia simplex* and *rupia prominens*, the ulcerated skin is to be bathed with decoction of *althea* if it be painful; but if the inflammation appear indolent and below the pitch requisite for the production of a new epidermis or the formation of a *cicatrix*, it may be stimulated with a wash of wine and water, or a weak solution of cream of tartar. I have been in the habit of ordering the sores of *rupia* to be dusted with cream of tartar, and of all the topical applications I have tried, this is the one that seemed to me to answer best." 234.

Vesiculæ. The only change introduced by Rayer into his classification of vesicular eruptions, since the appearance of the first edition of his work, is the unnecessary admission of the new genus "*Hydrargyria*" which had previously been arranged as the "*Eczema Mercuriale*." Dr. Green has done right not to follow him in this particular; but he has not shewn the same sagacity, when he makes this observation that "*Herpes* and *Eczema* are essentially chronic in their nature." His own description of acute *Eczema* falsifies this strange assertion, and with respect to *Herpes*, one of the very earliest remarks of his French preceptor in the account of *Zona* is "I have never met with it as a chronic disease," and he adds that the blood has been buffy in almost all the patients affected with *Zona*, for whom he had occasion to prescribe *venæsection*.

The entire description of this variety of *Herpes* given by Rayer is most minutely correct, both as regards its appearances and treatment. He alludes to the effect of the application of the nitrate of silver to the affected parts in the following terms:

"I find now, 1st. that if, after having opened the vesicles, or removed the cuticle by excision, their bottoms be very lightly touched with the nitrate of silver, in the same way as is often done in *aphthæ*, the duration of shingles is abridged, and that, on the contrary, it is prolonged, if the escharotic be too freely and carelessly applied; 2nd, that the vesicles, when properly cauterized, are more rarely followed by excoriations, or by eschars, than those that are left to themselves, especially in elderly persons, and when they are situated upon the posterior parts of the body; 3rd, that this system, which may be omitted in slight and distinct cases of shingles, ought to be put in force whenever there seems reason to apprehend excoriations or eschars in any of the groupes on the body, face, &c.; 4th, that in touching slightly the red patches which precede the eruption of the vesicles, and especially those which appear subsequently to the first crop of clusters, their farther development is almost always arrested, but that the acute pain which accompanies them is not modified or abated." 260.

Being on the subject of *Herpes*, we may briefly allude to a mistake, which is still occasionally committed by young practitioners, and which has arisen from the confusion in the nomenclature of diseases; we mean, that of supposing that the *Herpes Circinatus*, or Vesicular Ringworm is ever contagious. Had the appellation of "Ringworm," not been applied to two essentially different diseases, viz. this variety of *Herpes*, and the intractable *Porrigo Scutulata*, we should never have heard of this error. As Rayer rather quaintly says, the former disease "cannot be and never is propagated by inoculation." It is not unfrequent to observe several cases of *H. Circinatus* occurring simultaneously in schools, &c. but this arises merely from all the children being exposed to the same morbid causes.

The treatment of *Herpes Circinatus* is very simple, and is quite similar to what

is adapted to the other species of the disease. "Bateman," says Rayer, "recommends washes of sulphate of zinc, or borax, or alum, to soothe the itching that attends the formation of the vesicles in herpes circinatus. The application of a linen rag dipped in plain cold water, and frequently renewed, answers the same end completely. Alkaline baths and saline lotions have likewise been successfully employed in this complaint. I am in the habit of recurring to slight cauterization with the nitrate of silver, with very good effects. In a word, the mode of treating herpes *circinatus* does not differ from that which has been recommended in herpes *phlyctenodes*." 272.

The next vesicular disease after Herpes, is the equally common one of Eczema. It is highly important for the medical practitioner to be well acquainted with the varying appearances of this eruption; not indeed, that he is to expect to find the features of every case to correspond precisely with the descriptions of any authors, but that he may be able to recognize the original and essential characters of the disease, although modified by constitution and other circumstances, or associated and complicated with other cutaneous affections. The history of eczema affords another apt illustration of the remark which we have* previously made, that a great number of skin diseases have a truly compound character, and exhibit transitional appearances during their progress. Willan and Bateman acknowledged the very close affinity between Eczema and Impetigo, by admitting among the species of the former disease, the 'Eczema Impetiginodes.' On this subject, Rayer very accurately observes.

"Eczema and impetigo have between them many strong points of resemblance, as well in reference to the parts of the body most commonly affected, as perhaps in regard to the constituent element of the skin, the follicles, in which they are both evolved; it is not, therefore, uncommon to meet in the same individual with impetigo affecting one quarter, and eczema developed in another. It often happens also that we find a mixture of the vesicles of eczema and of the pustules of impetigo covering surfaces of the integuments of greater or less extent, and still more frequently do we find the vesicles of eczema becoming purulent and giving occasion to an anomalous variety of the disease which has been described by Willan, under the title of eczema *impetiginodes*. When this variety makes its attack in an acute form, the tension, heat and redness are considerable; it is not now mere tingling and itching that are complained of, but shooting and violent smarting pain. The vesicles now pass rapidly into the purulent state; the cuticle, raised in large flaps, is impregnated with the fluid effused, and acquires the appearance of greenish coloured laminated scabs, which being before long detached, a surface is exposed of as bright a red as carmine. When the eruption is considerable, the ichorous fluid secreted is so profuse that dressings of every kind, and even the bed-clothes and bedding become drenched with it; the smell of this matter too is as offensive as possible; it is faint and sickly, and something like that which a large burned surface in a state of suppuration diffuses." 285.

All this is strictly correct; but we think that Rayer, and following his authority, Dr. Green, have most unnecessarily transferred that species of Impetigo, which is almost peculiar to infants and children, and which has been so long known by the name of Crusta Lactea; (injudiciously arranged in the genus Porrigo by Willan) among the Eczemata. It is certainly rather a pustular, than a vesicular disease.*

* We regret to find that Dr. A. T. Thomson, in the article Porrigo, in the Cyclopaedia, has not only most annoyingly (contrary too to the express opinion of Bateman) adhered to the old arrangement of the Crusta Lactea in this genus, but has injudiciously added to the confusion which had already existed in the

Eczema is very apt, under certain circumstances, to become chronic; and then its distinctive characters are apt to be much changed from their original appearances.

"When the inflammation declines in severity, *chronic eczema* assumes another character. After the lapse of a longer or shorter interval, the vesicular, or vesiculo-pustular eruptions become rarer, and even end by not appearing at all; the scabs, at first moist and thick, and reproduced as soon as detached, grow thinner and thinner, drier, and more adherent to the skin, which at length appears covered by small yellowish coloured scabs,—the *dartre squameuse ou furfuracée* of some authors—among which several bloody incrustations, the consequence of the excoriations caused by the nails of the patient, may be detected. The serous exudation is replaced by a simple epidermic exfoliation, to a greater or smaller amount. The more severe these eczemas have been, and the longer they have continued in this state, the longer is their complete disappearance expected, even after amendment has begun, and longer still are certain sequelæ, by which the previous existence of the disease may be certainly recognized, of being completely obliterated." 287.

Hence cases of chronic Eczema are not unfrequently mistaken for Psoriasis.

The treatment of the active or acute forms of Eczema is simple and usually quite successful.

The antiphlogistic regimen, general bleeding in some cases, cooling purgatives, the vegetable and mineral acids, a light mild diet, tepid baths, and the local application of cold water to the affected surface, will almost always lead the malady to a fortunate issue.

The chronic forms of the disease are, on the other hand, most distressingly refractory. Dr. Green states—

"When eczema appears with decidedly chronic symptoms, the sulphuric or nitric acid in conjunction with general dietetic measures will be found a medicine of great value. Any of the neutral salts in gently purgative doses continued for some length of time, frequently proves of signal service in these cases. The alkalis as well as the acids also deserve a trial; the liquor potassæ in doses of ten drops in barley water, twice a day, and gradually increased, has sometimes the best effects in modifying eczemas of old standing. When the pruritus is very troublesome, an alkaline bath taken in the evening will often be found to allay this distressing symptom greatly, and procure the patient a good night. The sulphureous water bath has frequently the same effects, and seems farther, in many old cases, to modify the eruption favourably. When the disease is indolent, the more powerful stimulus of the vapour bath or douche may be tried, often with the happiest effects; but the action of this bath requires to be closely watched, as eczema will not bear to be tampered with in any of its forms, and the application of stimulating remedies of all kinds is apt to be followed by an aggravation in the symptoms of the disease. For this reason it is that the hot air and sulphur fume bath are seldom applicable in cases of eczema. They can only by possibility do good when the disease is in an indolent state, and when the system has been prepared for their action by previous depletion and abstinence. Then, and especially among the aged, I have known them of service in this disease after all other means had been tried and proved unavailing.

During the course of the whole of the varieties of chronic as well as of acute, local as well as general, eczema, a wash of the liquor plumbi sub-acetatis and emulsion of bitter almonds, or of the diluted hydrocyanic acid, may be freely used with a view to allay pruritus." 81.

history of Porrigo by introducing a most unnecessary arrangement of his own. He speaks of the true Porrigo, (including *P. Larvalis*, *Lupinosa*, and *Favosa*,) the eczematous Porrigo, (*P. Furfurans*,) and the anomalous Porrigo, [of which he makes two species, *P. Sentulata* and *P. Decalvans*!]

Some obstinate cases have yielded to the internal use of arsenic, after all other remedies had failed.

The only notice which we can afford to take of the next disease in the vesicular catalogue, Scabies, or the Itch, is to recommend a formula for an ointment, which was communicated to Dr. Green by Sir William Russell, as of great efficiency in India.

"R. Sulph. loti ʒss. sodæ boracis, ammon. muriat. āā ʒss. hydrar. præcip. albi, ʒi. ungt. simpl. ʒi. to which ʒij. or ʒiij. of ol. terebinth. may be added or not at pleasure." 67.

There can be no doubt, that the only certain method of curing the disease, which King Jamie held crowned heads alone were worthy of having, [so supreme according to his notions, was the pleasure of scratching,] is by the free local application of sulphur in the form of ointment. Sulphureous washes, baths, and fumigations cannot be depended upon.

The next order of the cutaneous diseases, is the Pustulous; in which is included some of the most common and interesting cutaneous diseases, as Variola, the different forms of Varicella, Vaccinia, and also its varieties and modifications. At present we shall not enter on the consideration of any of the important questions connected with this most important groupe of cognate diseases, as it is our intention, if we have room, to make some remarks upon them in a subsequent part of this number, when treating of vaccination. Acné, including the Rosacea, or Couperose of the French authors, and Sycosis, or Mentagra, are, although obstinate, never dangerous affections. We must refer our readers to Rayser for minute descriptions of these; and proceed to the consideration of a disease, which is much more important, both from its frequency and severity, Impetigo. Great confusion, and no inconsiderable amount of practical error, has been introduced by Dr. Willan and Bateman into their descriptions of this and of another pustular disease, Porrigio,* by mistaking the varieties of the one for those of the other. Rayser, and following him Dr. Green, have contributed materially to improve our knowledge of these diseases, by pointing out the distinctive characters by which they may be discriminated from each other. Independently of other signs, "impetigo," says Dr. G. "is remarkably distinguished from the Tineas or Porrigos by the non-contagiousness of its nature, and by the form and character of its incrustations, which are moist, rugous, and continuous, not hard, dry, dimpled, and moulded, like those of true porrigio;" and in another part, speaking of the two forms of Porrigio, he states, "in fact, no other disease of the skin is characterized by minute yellow pustules, whose contents concrete, almost as soon as they are visible, into little cup-shaped, hard, and extremely dry yellow scabs. When the incrustations are older they split into pieces, and often hang among the hair like the crusts of impetigo *granulata*; but the absence of discharge, and the loss of the hair, always distinguish the porrigio from the impetiginous affection." Now the P. Larvalis (the crusta lactea of older authors) and the P. Favosa are certainly not contagious, and therefore they ought to be grouped among the species of Impetigo. Dr. Green correctly observes—

"Infants at the breast, and during the period of teething, are subject to a variety of impetigo *figurata*, which has long been familiarly known under the title of *crusta lactea*, and has been variously classed among the tineas and porrigos, by different writers, under the name of *tinea muciflua* of the face, *porrigio larvalis*, &c. The eruption in this affection is certainly impetiginous; it consists, in fact, of a number of small superficial pale yellowish pustules, more or

* Rayser has abolished this term altogether, and has substituted that of Favus. Let it therefore be kept in mind, in perusing any extracts which we may make from Rayser's work, that his genus Favus corresponds with the genus Porrigio of Dr. Green.

less confluent, and collected into clusters. These bursting in four or five days, are succeeded by greenish yellow coloured incrustations, sometimes thin and laminated, at other times thick and rugous, exactly as in *impetigo figurata*. Fresh crops of pustules are evolved in the neighbourhood of the first clusters, which add to the extent of the disease, at the same time that a good deal of exudation is going on under the incrustations, and adding to their thickness. The surface of a portion of the scalp, of the ears and lips, and even the whole of the face, is often seen covered in this way with a kind of mask, whence the epithet *larvalis*, assumed by Willan as characterizing the disease." 137.

Again Rayer:—

"*Impetigo sparsa* may also attack the neck, ears, and hairy scalp. The *tinea granulata* of Alibert, and the *porrigo favosa* of Willan, signify one and the same variety of impetigo. Impetigo of the hairy scalp is occasionally met with among adults; but the subjects it most usually attacks are children, and then it appears most frequently about the posterior parts of the head, the entire surface of which may be implicated. The disease appears in the shape of minute pustules of a yellowish-white colour, irregularly scattered over the hairy scalp, their centres traversed by a hair, and accompanied by a high degree of inflammation and excessive pruritus. In the course of from two to four days, these pustules pour forth a fluid that frequently agglutinates a number of hairs together, and dries into small brownish, or greyish rough and irregular crusts or masses, which M. Alibert has compared to fragments of roughly pounded mortar. These incrustations, become dry and friable, are detached from the skin, and remain adherent to the hair, which frequently appears filled with them. A very faint, sickly, and unpleasant smell is exhaled from the head, sometimes of so powerful a nature when all attention to cleanliness is neglected, that the whole atmosphere of a room is contaminated with it. Pediculi multiply rapidly, and swarm among the hair, which is rarely lost in this disease, but is very frequently matted or agglutinated into masses by the adhesive qualities of the discharge.

Impetigo of the hairy scalp scarcely lasts longer than some months, and it most frequently gets well with proper treatment in the course of a few weeks." 497.

As we wish to *debarrasser* this subject from the confusion in which it has been so long involved, we shall make another extract from Dr. Green, which, though long, will amply reward the reader's attention.

"By *porrigo* (the *favus* of Rayer) I understand a pustular and contagious disease of the skin, which commonly affects the scalp, but occasionally appears on other regions of the body also. This affection assumes two principal forms: in the one, the pustules characteristic of the disease are distinct and disseminated; in the other they are confluent and collected into clusters, and ultimately into annular patches. In both varieties the pustules are *favi*: that is to say, small, rounded, pale yellow pustules, set, as it were, in a frame of epidermis, and containing a fluid, which almost immediately concretes into cup-shaped, straw-coloured scabs; these go on increasing in thickness for many days, and at length, by cohering, compose a thick, hard, greyish yellow coloured incrustation, the surface of which presents a congeries of cup-shaped cavities like the sealed cells of a honey-comb; this character however is frequently lost.

Under the head of *porrigo*, Willan, and those who have followed him, describe six different affections: *porrigo larvalis*, *por. favosa*, *por. furfurans*, *por. decalvans*, *por. lupinosa*, *por. scutulata*.

I have already had occasion to speak of two of these affections, *porrigo larvalis* and *porrigo favosa*, as species of another pustular eruption—*impetigo*, of which they are undoubtedly varieties. *Porrigo furfurans* may generally either be referred to one of the squamous affections—*pityriasis*, or be discovered to be an *eczema* or *impetigo* of the scalp. *Porrigo decalvans* is a title that does not

seem chosen with Willan's usual felicity; an effect of numerous diseases of the scalp being here assumed, as characteristic of a particular species. The state of baldness is a consequence of some affection of the bulbs which secrete the hair, and porrigo is only one of the forms of inflammation that attacks these organs, and either temporarily suspends or entirely destroys their functions. Finally, *porrigo lupinosa*, which I shall treat of under the title *favosa*, and *porrigo scutulata*, stand apart, and are distinguished from the whole of the other diseases which have been described under this name, in the circumstances of their common contagious nature, and the form of their pustules and primary incrustations." 152.

It is to be regretted that the English author, after this very able elucidation of a perplexed subject, should persist in retaining the epithet "*Favosa*" to one of the two forms of the genuine *Porrigo*. It would have been much wiser in him to have retained it by the epithet "*Lupinosa*," as he admits that his species, *P. favosa*, corresponds to Willan's "*P. lupinosa*." With this single exception, the remarks of Dr. Green are excellent. His observations on the treatment of *Impetigo* and *Porrigo* are certainly the most judicious which we have ever read. They are derived from sound pathological views.

"When *impetigo* appears as an acute inflammatory affection, which it frequently does, it must be treated upon the general principles which guide us in this class of complaints. In the milder forms, the antiphlogistic regimen and emollient tepid fomentations, as of milk and water, decoction of bran, &c. and light dressings of the unguent. oxid. zinci. or plumbi superacetatis; in the severer, the local and even the general abstraction of blood, when there is nothing in the state of the constitution forbidding the practice, in addition to these measures, seldom fail to subdue the violence of the symptoms. The application of a couple of leeches, one behind each ear, in children of two or three years old, when the inflammation runs high, unremitting attention to cleanliness, the hair being clipped short when the scalp is the part affected, the constant use at first of emollient tepid fomentations, and subsequently of weak alkaline washes, whilst the parts affected are touched night and morning with the unguent. nitrat. hydrarg. properly diluted, combined with the exhibition, now and then, of some very gentle aperient medicine, will generally be found sufficient to bring to a happy conclusion either of the two varieties of *impetigo* (*impetigo larvalis*, *imp. granulata*), to which they are most subject." 141.

The vapour-douche is frequently of the greatest service in removing the incrustations, and in inducing a more healthy condition of the affected integuments. The administration of mild aperients, as the *hydrargyrum cum cretâ*, with rhubarb and carbonate of soda, will be found to facilitate the cure.

"When *impetigo* assumes a decidedly chronic type, the habitual use of a drink acidulated with the nitric or sulphuric acid, the occasional exhibition of an aperient dose of one of the neutral salts, as of the sulphate of magnesia, prolonged immersion in the tepid bath, and the topical application of a stimulating wash (the hydrocyanic acid properly diluted has been strongly recommended) may often be tried with decided advantage.

Should the inflamed surfaces continue indolent under this system of medication, the more powerful influence of the hot air or vapour-bath, may be cautiously tried. These baths should be administered at a low temperature at first, and their effects carefully watched. If they do not cause too great a degree of re-action, and yet fail to bring about a decided improvement in the disease, the parts affected, after being cleared from scabs as much as possible by the use of the tepid douche and vapour-bath, may be touched with a weak solution of the nitrate of silver in distilled water. The citrine ointment is another stimulating application that is frequently employed under these circumstances with very good effect." 143.

In the very obstinate cases, Dr. Green has derived greater benefit from the use of the sulphur-fume bath, than from any other remedial means. [The cases related in the *Periscope* illustrate most satisfactorily the decided efficacy of this powerful agent.] The cautious administration of the arsenical solution is frequently attended with the most marked advantage, in some of the more intracutable forms of Impetigo.* Rayer speaks highly of the good effects of the nitric acid, in doses of from half to a whole drachm in a pint of barley water, taken daily in obstinate Impetigos. "It very seldom happens (says he) that this medicine is continued for a month or six weeks, without accomplishing a cure."

The treatment of genuine Porrigio is usually much more difficult than that of most of the forms of Impetigo. It appears to be more decidedly a local disease, and we quite agree with Dr. Green in the assertion, that—

"While various remedies are tried in succession, the most unremitting attention is to be paid to the ablution of the parts, and to the removal of incrustations and dead hair. This, indeed, is the sheet-anchor in the treatment of porrigio. In ninety-nine cases in a hundred, the disease will yield within three months to any plan of treatment adopted where this forms the principal feature, whilst every plan that can be pursued will fail nearly in the same proportion where it is neglected." 157.

Rayer, also, has strongly insisted on the necessity of unremitting attention to the daily ablution of all the affected integuments, and to the removal of all dry crusts and loosened hair by means of a small-tooth-comb. The head should never be shaved, as the irritation thus induced always aggravates the disease. The hair may be cut quite short enough with fine scissors.

M. Biett has recently recommended strongly the application of an ointment, composed of from a scruple to a drachm of the ioduret of sulphur, and an ounce of lard, in the chronic stage of the disease.

Mr. Wigan, in a late communication to the *Medical Gazette*, praises very highly the following mode of treatment:—The head being shaved, apply all over it the strong pyroligneous acid of Beaufoy (it is well known in the shops by the name of the "eleven acid"—one part to eleven of water, being of the strength of distilled vinegar) diluted with one-third its volume of water. The head should be kept wet with it for two or three minutes. Slight pain follows this application, and all the spots of the disease are rendered more visible, while the healthy portions are not so much affected. The diseased parts are now to be soaked with fresh applications of the acid, in its full strength, for a quarter of an hour. This medication is to be repeated at intervals of three or four days. Mr. W. assures the profession, that he has been extraordinarily successful in the treatment of Porrigio since he adopted the use of the acid, as now described, and that the cure is almost always effected in a short time. When Porrigio is very chronic, the following lotion has been used by some practitioners with decided advantage. An ounce of the compound spirit of ammonia, with two or three drachms of laudanum. It should be applied at night, and the citrine ointment applied during the day.

We pass over the subject of Ecthyma, as it cannot be easily mistaken for any other cutaneous disease, and as its history and treatment are sufficiently well detailed in Bateman's Synopsis.

Papulæ. The remarks of Rayer on the treatment of Lichen are so good, that we shall give them nearly entire.

* In a late Number of our valued cotemporary, the *Edinburgh Medical and Surgical Journal*, Dr. Thwaites has recorded several cases, in proof of the great efficacy of the internal use of Fowler's solution in Porrigio furfurans.

"Recourse must be had to the internal administration of the nitric, muriatic, and especially of the sulphuric acid in large doses. These mineral acids, when they seem to engender any considerable degree of irritability of the digestive organs, must however be replaced by some of the less active vegetable acids, such as the citric and acetic. As a final measure, and when the papulæ are extremely numerous, agglomerated and confluent in various places, as they are in the lichen *agrius*, if the patient be young and of good constitution, it may be necessary to detract blood once or oftener. General bloodletting is indeed an indispensable measure when the eruption is not confined to any determinate region of the body, such as the hand, face, &c. When blood is extracted locally, the leeches employed must always be attached beyond the circle of the eruption; as without this precaution the irritation of their bites is apt to aggravate instead of relieving the local inflammation. All topical applications should be of the mildest description, and used cool or cold to the affected parts. Soothing washes, and gelatinous or mucilaginous baths, are generally useful when applied at low temperatures. Patients should, at the same time, be put upon the use of one of the acids which have been mentioned, combined as a sherbet, and should be advised to dress themselves with soft under garments, and such clothing as will not tend to excite or increase the heat of the body.

The effects of these various means ought to be seconded by a regimen of greater or less severity, according to the state of the constitution. Patients must at all events abstain from spiced food of every kind, spirituous liquors, in a word, from all that could possibly tend by its stimulating qualities upon the stomach, to produce at a later period any thing like a determination to the skin.

When lichen consists of several successive eruptions, and has assumed the chronic character, if the constitution of patients appears to have suffered from age, or any other cause, the practitioner should be careful to strengthen it as much as possible by the exhibition of tonics, and the recommendation of a suitable regimen, even before he thinks of attempting to treat the eruption.

When the disease is of very long standing, and affects the integuments deeply, the affected parts are often slightly anointed with the following ointment with the greatest advantage: R. Adipis suil. ʒj. Sulphur. sublim. ʒj. Potassæ subcarb. ʒss. Emollient temperate baths are to be used at the same time, and after some little interval has elapsed, they may even be taken slightly alkaline. Under similar circumstances I have frequently prescribed either of the following unguents with excellent effects: R. Adipis suil. ʒj. Calomelan. ʒj. Camphoræ, gr. xviii.—R. Adipis suil. ʒj. Hydrarg. deuto-ioduret. gr. x. M. I have also occasionally succeeded in giving relief from the pruritus by cauterizing the affected parts of the skin very slightly with nitrate of silver, or by the use of vinegar and water as a lotion." 585.

And he adds :—

"When *chronic* lichen has withstood these various plans of treatment in an individual otherwise in good health, exempt from visceral affections, &c. when the disease is hereditary, is dispersed over a large surface of the body, and occasions distressing insomnia, we must then have recourse to some of the preparations of *arsenic*, and continue this class of medicines for a long time in graduated doses, it being always understood that they produce no manifestly injurious effects on the constitution. I have succeeded in removing several *circumscribed lichens* of old standing by the internal use of the solution of the arseniate of soda, and of sulphuretted alkaline inunctions. These remedies, however, it must be presumed, are only to be employed in the small number of cases in which all other means have been fruitlessly enforced, and the disease has attained such severity that patients, worn out and reduced to despair, insist on getting rid of their infirmity at all hazards. It is farther necessary, before prescribing these active medicines, to enquire particularly into the state of the digestive organs,

only to increase the doses very gradually, and above all not to exceed from fifteen to twenty drops daily of Fowler's, or a drachm of Pearson's arsenical solution for an adult, in some mucilaginous fluid." 586.

The following practical remarks on the use of baths, by Dr. Green, are deserving of attention.

"The hot air or vapour bath, at a low temperature, may be cautiously adventured on; and if the eruption stands this kind of stimulus, we shall generally be able to cure the disease either by continuing the remedy, or recurring to the more powerful sulphur-fume bath. I have had repeated occasion to remark, that the hot air and sulphur-fume bath were always better borne, and produced more decidedly beneficial effects, when the parts affected were excoriated and moist from discharge; I have then no hesitation in prescribing this remedy, and always feel confident that it will prove beneficial. Even in the most chronic forms of this disease, a lax state of the bowels will be found of service. 181.

Baths are certainly more beneficial in cases of Prurigo than of Lichen. Dr. Green has given an excellent resumé of the means most worthy of trial in the former disease.

"The slighter cases of prurigo are successfully treated by a restricted diet, the occasional use of a gentle aperient, and prolonged immersion in the simple, weak alkaline, or sulphurous water bath, according to the degree and endurance of the eruption. In some cases it may be necessary to add the use of a diluent, acidulated with one of the mineral acids, or made slightly alkaline by the addition of half a drachm or a drachm of the subcarbonate of potash or soda, to each pint of the liquid, for a few days. A combination of sublimed sulphur and magnesia, or subcarbonate of soda, is also a good medicine in these cases; but the sulphur should be given in much smaller doses than those in which it is usually prescribed to produce its most beneficial effects; from two to four grains, with about ten or twelve of calcined magnesia, or subcarbonate of soda, twice a day, will be quite sufficient.

In none of its forms does this papular disease appear to be so much benefited by bloodletting as most of the other cutaneous inflammations. When blood has been drawn, however, even after the disease had merged into the chronic and inveterate state, it has always shewn the buffy coat, or the large and firm crassamentum, characteristic of an inflammatory condition of the system. Though it may be mostly held inadvisable to bleed generally in this complaint, the application of a number of leeches around the seats of the local varieties will often be found a measure productive of great relief; and this practice seconded by due attention to regimen, will often bring the disease into a state to bear the stimulus of the vapour, hot-air, or sulphur-fume bath. When patients have been lowered by abstinence and the exhibition of a few doses of purgative medicine, I always recommend the vapour-bath to be tried at a low temperature at first, and if, to the temporary excitement which immediately follows the use of this remedy, an abatement of the symptoms succeeds, as usually happens, I then know that I can command the disease. I have even observed that the more inveterate the affection appeared to be, the more severely the parts affected were excoriated, the more they were complicated with discharging sero-purulent eruptions, the more certainly were they first amended and ultimately cured by perseverance in the use first of the vapour, and then of the hot-air and sulphur-fume bath. Under the use of these means, the thickening of the skin and œdematous state of the subcutaneous cellular membrane are very speedily dissipated, and the withered, dry, and unperspiring surface rendered sleek and velvety to the touch, as it is in health." 188.

From the order of the Papulæ, we proceed to that of the Squamæ, or scaly diseases.

The classification of the squamæ adopted by Willan and Bateman is liable to several objections. This subject is admirably treated by Rayer.

"The number (says he) of squamous inflammations reckoned is six: Lepra, Psoriasis, Pityriasis, Pellagra, Acrodynia, and Scaly Syphilis. I shall treat of pellagra, and acrodynia when speaking of the cutaneous diseases peculiar to certain countries; and the history of squamous Syphilis will form part of that of the venereal disease in general. I have, farther, separated from the group of pityriasis, two varieties of cutaneous affection described by Willan under the heads pityriasis *versicolor*, and pityriasis *nigra*. These I denominate chloasma, and melasma, as I hold that they belong essentially to the class of pigmentary affections.

Mr. Plumbe and Dr. Duffin have proposed to unite the description of lepra to that of psoriasis. To place the distinguishing characters of these two diseases in greater relief, I have continued to describe them separately, although I still acknowledge the striking analogy that exists between their various symptoms. Inflammation of the reticular tissue and papillæ is the first and main feature of squamous affections. The squamæ are a secondary phenomenon, to which Willan attached too much importance when he assimilated ichthyosis to this class of diseases."

"Two squamous inflammatory affections, lepra and psoriasis, make their appearance in the shape of small, hard, prominent and papular looking elevations, the tops of which soon become covered with squamæ of a dull white colour. These elevations unite, and then change into scaly patches of various forms and dimensions, which may either be in small numbers and limited to a single region of the body, or occur disseminated over the whole of its surface. In the latter case, the desquamation is frequently so copious that the bed and clothes of the patient become filled with dry and whitish-looking scales.

The dermis beneath the scaly patches is found red and inflamed; and inveterate squamous affections are always accompanied with chapping and a morbid increase of thickness in the skin.

Squamous inflammations occasionally remain confined to the points which they have first invaded, or they quit these to shew themselves on others. They sometimes cause itching, tingling, and an unpleasant sensation of heat, phenomena, all of which are constantly increased by such causes as tend to raise the external temperature of the body. These sensations are usually very violent in pityriasis. The insensible perspiration appears occasionally to be diminished in the places occupied by the squamæ.

The various forms of squamous inflammation frequently complicate each other—a new proof of their analogy. They are rarely combined with any other form of cutaneous affection."

"The squamous inflammations commonly require several months, and sometimes several years of treatment for their cure. They are the more obstinate, as they occupy a larger extent of surface, and as they are of longer standing.

With regard to treatment, few of the phlegmasiæ have so many points of resemblance as the squamous inflammations; to be satisfied of this it is enough to glance from the treatment of lepra to that of psoriasis." 616.

The genus ichthyosis has been separated altogether from the order of the squamæ, because, in it, "the dermis is unaffected with any degree of redness, and is the seat of no morbid sensation." It has, therefore, been carried to a new order, established by Rayer, which he has denominated "hypertrophix," and which he thus characterises:—

"The papillæ of the skin and the epidermis, the vascular rete, occasionally the entire substance of the skin, and even the subcutaneous tissues themselves, now and then occur of unusual thickness. This state may be either congenital or adventitious." 966.

The full propriety of this arrangement is questionable. We alluded to the subject in our former review of Rayer. Dr. A. T. Thomson makes the rather strange remark in the *Cyclopædia*, that "Ichthyosis has a much greater affinity to the papular than to the scaly eruptions."

There is perhaps no cutaneous disease, which merits the study of physicians more than that of *Lepra*, whether we reflect upon the mistakes which have been so frequently committed in its diagnosis, or the occasional extreme obstinacy of this affection against all remedial measures. The pathological characters of the disease also lead to some interesting inquiries. The circular shape of the squamous patches is well known to be the distinctive mark usually inculcated between *Lepra* and the cognate affection, *Psoriasis*; and some pathologists have therefore supposed that the superficial bloodvessels of the skin are disposed in small concentric circles; while others with more probability have attributed the circular form of the patches to the circumstance of their being developed at first as rounded elevations, the inflammation in spreading retaining its primary form. In the study of *Lepra* it is well to remember says Rayer, that it seems to be almost essentially a local disease, the morbid action not extending beyond the parts of the skin immediately involved.

It has been very generally stated, and perhaps with truth, that *Lepra* is now-a-days of more frequent occurrence, than it was fifty years ago. It is certainly not communicable by contact.

We shall probably allude at a future part of this article to the strange confusion which has been sometimes introduced into dermatology, by applying the appellation of *Lepra*, or *Leprosy*, to two essentially different diseases, viz. Greek *Elephantiasis* and Arabian *Elephantiasis*.

With respect to the prognosis of *Lepra*, we may observe, that, although not a dangerous disease, it is generally a very intractable one. When it attacks the aged, it is almost always incurable. Its hereditary forms are, as might be anticipated, the most obstinate of any.

The treatment, therefore, of *Lepra* requires no inconsiderable practical skill. Remedial means are usually observed to be more efficacious in Spring and Summer, than in cold weather. Indeed many cases, especially in young people, appear to have a tendency to get well spontaneously during the continuance of warm weather.

Rayer evinces much judgment in his description of the treatment of *Lepra*. "When it is of a recent date, and extends over a large surface of the body, when the patches are affected with a painful pruritus, and the motions of the joints are impeded, the disease will be aggravated by sea-bathing, by frictions or lotions with the preparations of sulphur, &c. which have been far too indiscriminately recommended in the treatment of diseases of the skin: blood-letting, on the contrary, and anointing the parts affected with cream, fresh butter, or sweet lard, give speedy relief. The vapour-bath, and the emollient or gelatinous bath may be employed as a principal or accessory means. The simple vapour-bath, occasionally proves sufficient of itself to cure recent *lepra*."

When the squamous patches are but very slightly inflamed, or of long standing, recourse is usually had to topical applications of a more or less exciting kind; before using these, however, it is always proper to cleanse the skin by means of fomentations, the tepid-bath, and gentle frictions, in case the scales adhere very firmly or lie in very thick layers. The use of stimulating washes, such as those composed of a mixture of spirits and water, or a solution of the sulphuret of potash, favours the removal of the scales, and often gives a favourable tendency to the progress of the patches. When the squamæ are detached, a little of the white pitch, tar, or weak nitrate of mercury ointment, may be rubbed over the affected parts, before the patient retires to rest for the night; next morning the skin must be washed with tepid water, or a weak saponaceous solution. By means of these topical applications, continued for several months, we occa-

sionally succeed in restoring its natural texture to the skin, even after a course of internal medicines had been tried and failed, I have, however, obtained a still greater number of cures by the inunction of an ointment of the white precipitate, a dram of white precipitate to an ounce of hog's lard; a dram or even a dram and a half of this mixture may be rubbed in every day without any risk of exciting salivation; this is the external application I am in the habit of prescribing in the greater number of cases of lepra." 624.

The following remarks by Dr. Houghton in the Cyclopædia, are of great practical value.

"A great improvement in the treatment of skin-diseases generally has taken place since the utility of bloodletting has been recognized in reducing the inflammation from an active to a passive state. It will much facilitate the cure of even the smallest extent of the disease to begin by a good bleeding; but it is in cases where it has spread very generally over the body that the bleeding is to be mainly depended on, at least at the outset of the treatment.

Dr. Duffin whose large experience of this remedy is very favourable to its use, after pointing out its striking usefulness in the circumstances adverted to above as peculiarly requiring it, adds, 'but supposing that there exist no general symptoms, still this mode of treatment is very often proper, were it had recourse to with no other view than to subdue the irritability of the skin or its extreme susceptibility to disease. But it has another good effect—it induces a state of the system that admits of being much sooner affected by the use of arsenic, when the active symptoms have been so far subdued as to allow of the employment of that medicine.' Its effect as a preparative is, indeed, the chief improvement we alluded to; and since it has been so employed, many remedies whose efficacy was much debated are now found decidedly useful, their exhibition being preceded by a bloodletting, and recourse being had to it during their use occasionally, if any symptom of the active inflammation re-appear. It would be obviously improper to employ it if the patient be in a debilitated state, the effects of a bad constitution, of the long duration of the disease, or of old age." 31.

¶ In the more obstinate cases of the disease, the internal use of arsenic, or of the tincture of cantharides has been found strikingly efficacious, especially when the hot air, or sulphur fume baths have been employed at the same time. The liquor potassæ in gradually increased doses is also a medicine of approved credit. Dr. Beck of Ipswich, recently published a clever Essay on Lepra, the object of which was to demonstrate the remedial powers of pitch, internally as well as externally administered, in this disease. Our readers will find an abstract of this Essay in the Number of this Review for last October.

The treatment of Psoriasis is essentially the same, as that of Lepra; indeed the two diseases appear to be, with the exception of the difference in the form of the squamous patches, essentially the same.

“By taking away,” says Dr. Green, “a little blood from the arm, exhibiting a few aperient draughts, and soothing the irritable state of the surface by means of an emollient gruel bath in the first instance, and then resorting to the vapour and subsequently to the sulphur fume bath, I have never failed either in effecting the most signal amendment in the state of this rebellious disease, or in subduing it entirely.

The local varieties of psoriasis are to be treated in the same manner as the more general forms of the disease. A course of purgatives has often a marked and beneficial influence on several of them. The application of a number of leeches in the neighbourhood of the affected parts ought never to be neglected: they may be attached under the angle of the jaw or behind the ear in psoriasis *ophthalmica*, and around the wrist in psoriasis of the palm and back of the hand. The watery vapour and sulphur fume douche are often of essential service in these partial affections, as the steam and sulphur fume bath are in the more general disease.

When the parts are freed from squamæ by the use of the vapour bath or douche, a variety of unguents are often extremely useful in giving a favourable turn to the inflammation. I have already spoken of the liniment of the liquor potassæ. The unguentum hydrargyri nitratis of graduated strength, or a salve of the precipitated sub-muriate of the same metal, will often be found useful, especially in the *ophthalmic* and *labial* forms of the disease. In several of the other varieties, an ointment of the proto-ioduret, or deuto-ioduret of mercury, (12 grains to the ounce of lard,) or of the ioduret of sulphur, (15 to 20 grains to the ounce of lard,) will be found to infuse activity into the few indolent patches that sometimes remain about the elbows, having obstinately resisted the curative means that have been successfully used against the disease in other quarters." 225.

Arsenic is quite as efficacious in curing Psoriasis as Lepra, and the trial of it ought therefore never to be omitted in obstinate cases.

The division of the genus *Ptyriasis* adopted by Willan has undergone considerable changes in Rayer's Treatise.

In the following remarks on its diagnosis from other cutaneous affections, it will be observed that two of Willan's species are transferred to another section of the classification.

"When *ptyriasis* is compared with *lepra* the same points of difference are detected, with two distinguishing features in addition; the circular form of the patches of *lepra*, and their mode of recovery from the centre towards the circumference. The detachment of the cuticle in *ichthyosis* is not preceded by redness or morbid sensations of the skin. The desquamation that follows chronic lichen and eczema is preceded by the evolution of papulæ and vesicles. I shall by and by have occasion to contrast *ptyriasis* with *acrodynia* and with *pellagra*, but I must here pause to expose the characters that distinguish it from *chloasma* (*ptyriasis versicolor*, Willan,) and from *melasma* (*ptyriasis nigra*, Willan,) diseases which I have felt called upon to transfer to another order, that, namely, of the adventitious *pigmentary discolorations*. In the first place, the most striking feature in the two diseases, last mentioned, is undoubtedly the change of colour presented by the skin; farther, if some degree of desquamation does take place at one period in the progress of these diseases, an habitual and abundant exfoliation of the cuticle forms no point in their history. Neither is there any of that serous exudation which I have mentioned when speaking of acute *ptyriasis*; lastly, the ease with which *chloasma* is cured, and the deplorable resistance of *ptyriasis*, in almost every instance, to remedial measures of every kind, show an essential difference in the nature of these two diseases. As to *melasma* (*ptyriasis nigra*, Willan), when desquamation has once taken place, it seldom happens, that this phenomenon and the other symptoms of the disease return with any intensity, or prove of any duration." 656.

Ptyriasis is not usually a very troublesome complaint. We need not allude to the general principles which are to direct the physician in the treatment of it, as indeed they are applicable to every disease which affects the skin. The removal of all irritation, constitutional as well as local, and the correction of any derangement of the stomach, bowels and kidneys, are of invariable and most peremptory importance. In very obstinate cases, the internal use of the corrosive sublimate has succeeded, when all other means had failed; but this potent agent is much less uniformly successful than another, which fortunately is at the same time more simple and safe, we allude to the sulphur fume bath.

"I am happy," states Dr. Green, "to say, however, that I have never known one instance of *ptyriasis* (and I have had cases under my care of thirty years' standing) which resisted a few exposures to the sulphur fume bath. I am in the habit, consequently, after prescribing a gentle aperient for a few days, to commence the use of this powerful remedial agent with as little delay as possible, and hitherto with complete success." 236.

Simple alkaline, or alkaline sulphureous lotions, the white precipitate ointment, and the vapour-douche, will almost always dissipate Ptyriasis, when only a small surface is affected.

The two species of Ptyriasis, designated *P. versicolor* and *P. nigra* in Willan's system, are carried by Rayer and Green to that part of their classifications which treats of the "alterations in the colour of the skin," as will be seen by referring to the tabular view given at the commencement of the present article. The *P. versicolor*, Chloasma, or, as it is vulgarly called, liver spots, is of very frequent occurrence in persons otherwise in perfect health. The colour of the spots varies, from that of the pale yellow of a withered leaf, to the deep yellow of rhubarb or saffron. They are usually scattered over the anterior parts of the chest and abdomen. Females are more subject to Chloasma than males; and the depth of the colour is generally observed to be increased during the catamenial periods.

"Sulphur, in one or another of its usual forms, appears to be a kind of specific in chloasma. Its spots disappear rapidly under the internal use of any of the common sulphureous mineral waters, as well as by the external employment of the same agents in the form of baths. When they resist these measures, the sulphur-fume bath will be found to dissipate them almost with a single application." 331.

And Rayer states—

"Chloasma is in general easily subdued by the use of sulphureous baths. Nevertheless I have seen several cases of a variety of this affection which is almost incurable, but which is happily of no real consequence. Almost the whole surface of the body was covered with large spots of a dirty-yellow colour, neither itchy nor furfuraceous, some of which it would have been impossible to cover with the palms of both hands joined together. In these rare cases, small streaks only, or isolated points of healthy skin, were seen between the spots. Several of the patients thus affected had been sent to various watering-places, but this without avail in so far as the affection of the skin was concerned, and almost always with temporary injury to their general health. These yellow discolorations of the skin resemble meladermia in their rebelliousness to treatment and their continuance." 949.

The Ptyriasis nigra of Willan, or Melasma of Rayer, is much more uncommon than the species now described.

In our former review of Rayer's work, we promised to devote a page or two to the illustration of the two diseases, which have so unfortunately passed under the same name of Elephantiasis—the *E. Græcorum*, or Leprosy of the Middle Ages, and the *E. Arabum*. The former is truly a cutaneous disease, and ranks in the order of the Tubercula. It never ought to have been styled either Leprosy or Elephantiasis, as it neither has the characters of a scaly disease (*Lepros*;) nor does it exhibit that hideous enlargement of any part of the body which can, with any propriety, be compared to the members of an elephant. It would have been well had Rayer insisted upon affixing a new name to it. He has thus described it.

"The Greek Elephantiasis is a serious chronic disease, characterised externally by shining and oily-looking dark patches, to which succeed irregular, slightly-prominent, softish, and at first, red and livid tubercles, which by and by assume a dusky or bronze colour; these usually continue long indolent; they may terminate in resolution or ulceration; their most common seat is the face. They also often appear on the palatine arch; but the nose and ears, swelled and hideously distorted, are the parts of all others which suffer most frequently."

"The cutaneous tubercles of elephantiasis are small, soft, round, reddish, or livid tumors, the size of which varies between that of a pea and that of an olive. They generally appear on every part of the face, on the nose and ears particu-

larly, but are also, occasionally, though rarely, evolved on the legs only. When patients live under this infliction for a few years, the disease very commonly spreads to the whole body. The disease becomes even more and more marked. Of all the parts which are implicated, the face always bears the strongest traces of the havoc and deformity that characterise it. This seems to be generally puffed. The skin of the forehead, marked by numbers of deep transverse furrows, is beset with many tubercles, the superciliary ridges, swelled, and furrowed with oblique lines, are covered with nipple-like projections. The hair of the scalp, that of the eyebrows, and the cilia, are lost. The lips become thick and shining; the chin and concha of the ear enlarge, and become thickly covered with livid tumors; the lobe and alæ of the nose, are in general even more seriously altered than the other parts of the face; the nostrils are irregularly dilated; lastly, the cheeks are swollen, and the whole of the features, enlarged and distorted by the puffing of the subcutaneous cellular membrane, acquire a character of the most frightful deformity." 735.

The tubercles of the Greek Elephantiasis are very seldom, or perhaps never seen on the trunk of the body. The upper and lower extremities are not unfrequently the seat of them; but the face is the part most commonly affected. The tubercles, in course of time, either are resolved, or they suppurate and break. The sanious pus of the tubercles dries up speedily, and forms adhering brown or blackish scabs, which rarely rise above the level of the skin.

"The mucous membrane of the mouth, the velum palati, uvula, amygdalæ, pharynx, and nasal fossæ, very commonly also present tubercles, but less voluminous than those of the skin; a longitudinal band of tubercles is frequently seen extending from the superior incisor teeth backwards along the roof of the mouth to the uvula. The lingual veins are occasionally observed to be varicose. An inflamed state of the pituitary membrane gives rise to the secretion of a sero-purulent fluid from the nostrils, to pain of the frontal sinuses, and finally to caries of the cartilages and turbinated bones of the nose. The voice becomes hoarse, nasal, and then is lost. The affections of the organ of hearing in elephantiasis do not extend beyond the external auricle. This part is enlarged, deformed, of a livid colour, and commonly beset with tubercles: The sense of smell, almost uniformly deranged even from the commencement of the disease, is always destroyed entirely when it has attained a certain stage; that is to say, when the pituitary membrane, covered with tubercles, ulcerates, and pours out a profusion of fetid secretion. The eyes, except the deformity caused by the loss of the cilia, are seldom affected either externally or internally. Although the arch of the palate and the lining membrane of the mouth are frequently thickly beset with small tubercles, developed in the mucous follicles of this tissue, the sense of taste generally remains intact. The pharynx at length, is usually covered with tubercles, but the œsophagus is seldom thus affected. When the patient has not been put upon a lengthened course of purgatives or arsenical preparations, the stomach and intestines commonly perform their functions satisfactorily. Yet in the bodies of those who have died while labouring under Greek elephantiasis, the follicles of Peyer have been found very much developed, as well as intestinal tubercles ulcerated, or on the point of becoming so, small cicatrices, and enlarged or tubercular mesenteric glands (Larrey). The liver and spleen have not been observed to be morbidly affected. In accordance with the affection of the voice during life, a thickened state of the mucous folds of the larynx, tubercles upon the chordæ vocales, and occasionally ulcers which had destroyed the thyro-arytenoid ligaments, have been discovered after death. Neither is it uncommon to observe small ulcers of the mucous membrane of the trachea. The lungs have generally some crude or softened tubercles scattered through their substance. Three patients affected with elephantiasis, whose bodies I have examined, after their demise, presented this alteration of the lungs. Others, who have died at a less advanced stage of the disease, have shewn une-

quivocal traces of pneumonia. The organs of circulation and of innervation present nothing peculiar, so long as the disease continues limited to the skin." 737.

The tubercular disease now described was first observed in Egypt, then in Italy during the time of Pompey, and subsequently it has been seen in all the quarters of the globe. During the middle ages, especially about the period of the Crusades, it spread over Europe like an epidemic; and lazarettoes were established in almost every town for the reception of the "lepers." Since the beginning of the 17th century, it has disappeared from almost all the districts of our continent, and, at the present time, it seems to be limited to the inter-tropical regions. It has been studied by various authors within the last thirty years in Asia Minor, in Egypt and Abyssinia, in India, Sumatra, Ceylon, the West Coast of Africa, Madeira, Isle of France and Madagascar, West Indies, Brazils, and at New Orleans. Occasionally it has been witnessed in the South of France and in some parts of Spain. It is truly a cachexy, or disease connected with a depravation of the system, and appears to be, in some respects, a formidable aggravation of *Ethyma Cachecticum*. Wherever it does occur, it attacks the poor and miserable infinitely more frequently than those who are in comfortable circumstances. An unhealthy climate, bad food and filthy habits, have certainly considerable influence in inducing this horrible disease. The Greek Elephantiasis has been supposed by some authors to be a mere modification of Syphilis. It is quite unnecessary to refute this opinion, but it deserves to be remembered in the study of the history of Syphilis, as given by the older authors in the 15th and 16th centuries, that the "Leprosy of the middle ages" was prevalent in these days. It is not improbable, therefore, that the characters of the new scourge, Syphilis, were not a little influenced by its attacking those who either were suffering, or had suffered from the Leprosy. We know nothing satisfactory as to the treatment of the Greek Elephantiasis. All the well-marked and severe cases of it are believed to be incurable. Those who are attacked with it before puberty commonly die from the 18th to the 25th year of their lives. The fatal termination is almost always owing to the sequelæ of inflammatory affections of the organs of respiration and of digestion. Removal from the climate, in which the disease has been acquired, is perhaps the most important part of the treatment; and when this step is taken, the adoption of all those means, dietetic as well as medicinal, which are most approved of for the amelioration of cachectic disease, ought to be vigorously adopted. Some East Indian practitioners have certainly derived much benefit in their treatment of the Greek Elephantiasis from the cautious administration of arsenic.

Allied in their nature and phenomena to, but certainly not identical with, the Greek Elephantiasis or Tubercular Leprosy of the middle ages, are the following endemic diseases which Rayer has grouped together under the term of elephantoid diseases: the Radesyge of the Norwegians;* the *Lepra* of Holstein, (*Speldalsked*); the *Lepra Taurica*, or Leprosy of the Cossacks; the *Lepa Anæsthesiaca* of the East Indies; the Ancient Leprosy of the Jews, and the *Malum Mortuum* of the middle ages. The admirably graphic description of the *Lepa Anæsthesiaca* by Dr. Robinson, in one of the volumes of the London Medico-chirurgical Transactions, will convey to the reader a tolerably correct notice of all these cognate diseases.

"One or two circumscribed spots or patches of a deeper colour, than that of the skin around them, appear on the feet or hands, and sometimes on the trunk and face; these spots are neither prominent nor depressed, they are shining and

* Some authors have considered this disease as a syphiloid affection. It presents a good many of the characters of the Greek Elephantiasis, and of confirmed secondary Syphilis together.

wrinkled; the wrinkles do not run into the surrounding healthy skin. The spots extend slowly until the skin of the legs and arms, and by degrees that of the whole body, when the disease is so extensive, is totally deprived of feeling. No perspiration takes place from the surfaces affected, neither are they itchy, nor painful, and it very seldom happens that they are swollen. In a more advanced stage of the disease the pulse becomes very slow, (fifty to sixty pulsations in a minute,) and soft without being small; constipation of the bowels follows; the toes and fingers are benumbed as though with cold, shining, slightly swelled, and somewhat stiff. The patient is indolent, slow in understanding the questions put to him, and seems to be constantly half asleep. The soles of the feet, and palms of the hands present hard and dry cracks; a furfuraceous matter is deposited under the nails, which raises them and occasions the skin around them to ulcerate. The legs and fore-arms swell; the skin is every where rough and chapped; at the same time ulcers form on the metacarpal and metatarsal articulations of the fingers, and toes, in the line of flexion, and in the corresponding parts of the articulations of the trunk, without any evident tumefaction or pain; pieces of skin half an inch in length become gangrenous and fall off, leaving the pale and flaccid muscles bare; these in their turn mortify, and by and by are also cast off. Different joints may be thus attacked and destroyed in succession, by the slow, but uninterrupted progress of this terrible disease, which renders those who are affected with it, objects of horror to all who approach them. The pains in this affection are not insupportable; the appetite is unaffected, and patients, horribly mutilated, sometimes live long without appearing to be disgusted with life. They are finally carried off by dysentery and diarrhœa. It deserves mention, that although *tubercular* elephantiasis sometimes shows itself during the course of elephantiasis *anæthesiaca*, it is not necessarily consequent on it."

Very different from the Elephantiasis of the Greeks, and from all the other analogous affections, is that disease which has been designated Arabian Elephantiasis. The term Elephantiasis is sufficiently appropriate to this malady, as designating the remarkable and elephant-like enlargement of the affected parts; but the adjective appellative of the disease is a most absurd one, derived only from the circumstance of its having been first accurately described by Rhazes and Avicenna, Arabian authors.

This Elephantiasis is very properly detached by Rayer from the order, Tubercula, of cutaneous diseases. He has arranged it in a group which he calls Intumescentiæ, and which he thus characterises. "This group comprises several diseases with which the skin is not primarily affected, but which occasion hypertrophy of its different layers. These diseases, sometimes preceded or accompanied by fever at the commencement, are almost always followed by permanent *intumescence* or enlargement of the parts affected." 1112.

The parts usually affected are the limbs, especially the lower ones, the scrotum, and the labia pudendi; but the upper extremities, the face, the mammae, the abdominal parietes, the verge of the anus, are occasionally subject to elephantoid enlargements.

Only one of these parts is commonly observed to be affected in the same patient. The disease begins in a manner not unlike to that in which diffuse inflammation of the cellular texture, or the Phlegmasia Dolens of puerperal women exhibits itself, and the morbid appearances discovered on dissection of patients who have died of Elephantiasis point out some degree of analogy between these diseases. In not a few cases which have of late years been minutely examined by some able pathologists in France, a morbid state of the veins of the lower limbs, the saphæna and the crural, has been detected. Rayer has reported a case, in which the anomalous development of one of the lower extremities coincided with a varicose state of the veins of the thigh, and he alludes to another case of Elephantiasis, in which he observed the contraction of one of the venæ saphenæ and the obliteration of the other. "In the left leg the vena saphena, laid

bare along its whole extent, appeared in the form of a cylindrical cord of a yellowish-white colour, and not transparent, about a third less in size than the same vein in its natural state; the cavity of this vein was found almost obliterated at the point of junction between its middle and lower third; the vessel having been cut across in this place, a central point was distinguished upon each of the cut extremities into which a fine wire of the diameter of that which is usually inserted into silver catheters could be introduced, though not without difficulty; the caliber of this vessel had become in some sort, capillary, through an extent of about two inches; its sides being double their usual thickness; the vein cut across transversely in any point where it was contracted, continued gaping in the same manner as an artery. The femoral vein towards its junction with the vena saphena, contained clots of recent formation; most of the other veins of this extremity presented no alteration. The vena saphena of the other leg, contained fibrinous clots of old formation, and adhering by their surface to the internal membrane of the vessel: the calibre of this vessel was not contracted, but its sides, like that of the right vena saphena, was thickened and resembled those of an artery." 1118.

M. Fabre found the vena saphena in a limb affected with Elephantiasis obstructed at several parts, and its walls greatly thickened. The posterior tibial vein also was obliterated in part of its course. The circumstance of this disease usually attacking those parts of the body in which the venous circulation is slowest and most liable to obstruction, viz. the lower limbs and scrotum, adds probability to the conjecture that inflammation of the veins may have some influence in producing it.

The lymphatic vessels and glands also of the affected parts are usually more or less diseased. The subcutaneous, cellular, and adipose tissues are always much hypertrophied and altered. "I have also found," says Rayer, "the cellular tissue infiltrated as it is in dropsies of long standing. M. Fabre has seen the subcutaneous cellular tissue converted into a thick, hard, almost fibro-cartilaginous layer presenting in several places small ossified plates, adhering so closely to the aponeurosis of the leg, and to the nerves and vessels which traverse it, that it was impossible to separate them. The sub-aponeurotic and inter-muscular cellular tissue participated in the same alterations, but in a less degree. In a woman who died in the Hôpital de la Charité, in 1820, whose lower limbs were affected with elephantiasis, M. Andral found, under the skin, and in the place of the muscles of this limb which were reduced to some thin discoloured shreds, an enormous mass of hard, condensed cellular tissue, with cavities here and there filled with serum, and partaking, in more than one place, of all the qualities of cartilage (*Precis d'anatomie pathologique*, t. i. p. 277.)" 1117.

The etiology of Elephantiasis is very imperfectly understood. As a general remark, it may be observed, that certain alterations of the veins, (varix, phlebitis, contraction, obliteration, &c.) and various forms of cutaneous inflammation, (erysipelas, eczema, lichen, ulcers,) are the diseases which have been the most frequently observed before the development of Arabian Elephantiasis or during its course.

From the preceding observations on this disease, it must be obvious that it is in almost every respect essentially different from the disease to which the appellation of Greek Elephantiasis has been so absurdly given. The latter is an infinitely more formidable malady than the former; the one is truly a constitutional cachexy, the other appears to be much more local in its origin and seat. With regard to the treatment of the Arabian Elephantiasis, rational hopes of a cure may frequently be entertained. General and topical bleedings, emollient fomentations, and entire rest, are the most judicious remedial measures at the commencement of the disease; and afterwards friction, and regulated compression by means of straps of plaster and of rollers, will be found of the greatest service. Internal medicines have not been found of much use in Arabian Elephantiasis.

Periscope;

OR,

CIRCUMSPECTIVE REVIEW.

"Ore trahit quodcunque potest, atque addit acervo."

I.

SPIRIT OF THE ENGLISH PERIODICALS, AND NOTICES OF ENGLISH MEDICAL LITERATURE.

CASES OF CARDITIS, WITH REMARKS.
BY DR. STROUD.*

We notice these cases, because their author appears to indulge in more than one assumption, which require comment.

Case. W. D. æt. 53, applied at the Northern Dispensary in May, 1831, on account of dry cough, disturbed sleep, pain at the epigastrium and in the arms, and headache. He had been a sailor, a blacksmith, a shoemaker, and a drunkard. The symptoms had existed for three years. We need not detail the treatment. The prescriptions are given at great length, and though very good in their way, we do not deem it necessary to transcribe them. On examination with the stethoscope, "the respiratory murmur was tolerably audible, but the sound of the heart's action was dull, while the pulse at the wrist was strong." To all acquainted with auscultation we need hardly say that this account of the auscultic phenomena is not satisfactory.

The hands and feet became œdematous, the cough more troublesome and attended with expectoration; orthopnoea was established, and, in spite of the most various prescriptions, the patient sank, and on the 31st of May he died. We give the notes of the appearances discovered after death, without abbreviation.

"*Post-mortem Appearances.* An inspection having been obtained the next

day, the following appearances were observed.

General Conditions. The body was robust and well formed, exhibiting little œdema, and no fat. The skin was firm, and the muscles were thick and red. The head and spine were not examined.

Thorax. The cartilages of the ribs were nearly ossified, especially those of the sixth pair. The mediastinum was broad, and its cellular membrane dense. The right pleural sac contained a considerable quantity of reddish serum; and owing, perhaps, to the weight of this liquid, and of the diseased liver, descended deeper into the abdomen than its fellow, contrary to the usual occurrence. The inner surfaces of the left pleural sac were universally united by short and firm adhesions, apparently of old standing. The right lung was somewhat inflated, or emphysematous, but otherwise healthy. The left lung was much hepatized, more especially the central parts, which were dense and red, while those near the surface were tolerably sound and spongy. The distinction was very perceptible on pressing the several portions between the fingers, when the one was found crepitous, and the other fleshy. There was no tubercle, vomica, or extravasation, either in the parenchyma of the lungs, or in the bronchial tubes: but the bronchial membrane, which was of a deep red colour, was coated with a little frothy cream-like mucus, and the mesochondriac fibres were very distinct.

The pericardium, with its contents, was of nearly double the usual size. The membrane itself was rather thick-

* Med. Quarterly Review, No. VIII.

ened, and contained several ounces of pellucid watery liquid. The substance of the heart, was, in general, firm, thick, and red, evidently from the influence of chronic inflammation. The cavities on both sides contained a good deal of soft, red, and broken coagulum. The right auricle was much dilated. Its *musculi pectinati* were extensive, but loose, exhibiting the appearance of strong fleshy columns, with wide interstices. The right ventricle presented nothing remarkable. The left auricle was dilated, and somewhat thickened. Its *auricula propria* was singularly contracted, and convoluted in a spiral form, like that of a *cornu Ammonis*, but quite pervious to the apex. The walls of the left ventricle were very thick. The aorta was much diseased, and, to some distance from the heart, was of nearly double its ordinary size and substance. On slitting it up, the lining membrane was found hypertrophied, presenting a scabrous and irregular surface, roughened by decussating fibres, with intervening indentations and depressions. The aortic valves were somewhat thick and rigid, but less so than the opposite lining membrane, which was slightly ossified. All the other valves, both cardiac and arterial, were sound. The orifices of the coronary arteries were contracted, and not easily discoverable, being concealed by a thin traverse fold, resembling an irregular valve.

Abdomen. The peritoneal sac contained a moderate quantity of reddish serum. The omentum was voluminous, and extensively spread over the surface of the intestines, but free from disease, and almost destitute of fat. The stomach was inflated, and of large size. Its lining membrane was of a dark colour. The intestines were generally healthy, but some portions of the ileum were red and contracted. The colon at the sigmoid flexure was abruptly and considerably dilated, but, with this exception, the large intestine was throughout much contracted and indented, containing only a small portion of thin yellow feces. The liver was, apparently, of nearly double its usual size and weight. On making incisions into its substance, it was found to be univer-

sally dense, and uniformly mottled with red and white spots, like some varieties of porphyry. The gall-bladder was small, and inclosed a little dark-coloured and ink-like bile. The spleen, and the kidneys were firm and sound; as were likewise the mesentery, and the urinary bladder, which was empty and collapsed."

We have given this account of the examination after death entire, because it allows us to make some observations on the subject. The narrator of a case should select the important particulars for the public. He should *study* symptoms generally and minutely, in order to discover what are and what are not material. But the same minuteness should never be carried into a report, where the object is to set before the reader the results of the writer's observation and inquiries, not every item of the inquiry itself. Dr. Stroud, however, thinks the public will be anxious to learn that the skin was firm, and the muscles red; and, the patient being 53 years of age, he is particular in specifying that the cartilages of the ribs, especially of the sixth, were nearly ossified—he observes that the mediastinum was broad—that there was coagulum in the heart—that the "*auricula propria*" of the left auricle was convoluted like a "*cornu ammonis*"—that the omentum was voluminous and spread over the intestines—that the stomach was large—that the spleen, kidneys, mesentery, and urinary bladder were healthy, with a variety of other circumstances equally irrelevant and unimportant. The fact is, that Dr. Stroud could have said all that was necessary, with reference to the dissection, in one quarter of a page, though nearly a page and a half are occupied with the details we have in part alluded to.

We said that Dr. Stroud indulged in some assumptions. He observes that "the substance of the heart was in general, thick, firm, and red, evidently from the influence of chronic inflammation." The propriety of the "*evidently*" is by no means so evident to us. On the contrary, the evidence is in favour of the existence of hypertrophy of the heart, independently of any positive

carditis. Sure we are that if increased firmness, thickness, and redness are to be deemed sufficient to prove that inflammation of the substance of the heart was going on, that disease would be more frequent than the best pathologists suspect it to be. The great number of cases of ventricular hypertrophy display the characters in question, characters, be it observed, displayed by all muscles in the hypertrophic condition.

We subjoin a specimen of our author's mode of reasoning.

"This conjunction of hypertrophy with dilatation, which existed not only in the heart, but, also, in the aorta to some distance from it, may serve to show, in opposition to the doctrine of certain eminent authors, that inflammation depends not on mere debility in the part affected, but on a specific irritation, accompanied with various kinds and degrees of functional derangement. The extensive development of the musculi pectinati, and the remarkable couvolution of the left auricula propria, owing, apparently, to a permanent contraction of its spiral muscular fibres, sufficiently prove that the expansion of their cavities was not the result of a simple deficiency of power. The increased and irregular growth of the lining membrane of the aorta had somewhat affected its valves, producing a tendency to ossification, and a partial obstruction of the orifices of the coronary arteries, which, probably, contributed to diminish the violence, and to retard the progress of the disease. This morbid state of the aorta is a frequent consequence of habitual intemperance, especially, perhaps, of indulgence in ardent spirits, and is often the primary cause of cardiac disease, which in this case seems, however, to have been chiefly independent."

The circumstance that such a disease as hypertrophy and dilatation of the heart occurs, is not of itself, we apprehend, sufficient to overthrow the doctrine of debility in the part in a state of inflammation. Dr. Stroud, however, is more sanguine, and we will not venture to molest him in his anticipations. We are by no means confident that en-

largement of the aorta tends to occasion disease of the heart; but we are quite sure that the converse is correct, and that hypertrophy of the left ventricle very frequently gives rise to dilatation of the aorta. One more quotation and we have done.

"The dropsical state usually attendant on such complaints, had not proceeded to any extent, either in the abdomen, or in the common cellular texture, having been chiefly confined to the serous membranes near the seat of the disease, namely, the pericardium, and the right pleural sac. Its limited amount might be ascribed to the early failure of vital power, and to the original soundness of the constitution, to which, also, in conjunction with the hypertrophy of the heart, it was probably owing that the solid viscera of the abdomen were generally firm, and the liver, in particular, was much enlarged and condensed, exhibiting on section a mottled texture, like that of porphyry, the joint result, perhaps, of intemperance, and of cardiac disease. The increased development of the stomach, the dark colour of its lining membrane, and the redness and constriction of some of the intestines, were, no doubt, partly dependent on the obstruction of their circulation, occasioned by the morbid state of the liver and heart."

We doubt if any comment is required to point out the improbable theories contained in this passage. How the limited extent of the dropsy could reasonably be imputed to the early failure of vital power, we profess ourselves unable to explain. Neither do we perceive why hypertrophy of the heart should tend to make the solid viscera of the abdomen firm. And, finally, why the obstructed state of their circulation should render the stomach large and dark, and the bowels red and small, is beyond our comprehension.

The second case is possessed of more intrinsic interest than the preceding, or than that which follows it.

Case. In April, 1833, a young woman, about 22 years old, was delivered of a still-born male child, at the full

period. She seemed much exhausted, was in a wretched state of want, complained much of thirst, had a pale countenance, a small and very quick pulse, and in thirty-six hours after delivery she died. It appeared upon inquiry that she had led an irregular and intemperate life, and that she had been abroad during the whole day preceding that on which her labour had occurred. From a very early age she had been subject to pains in the region of the heart, attended with palpitation and a sense of weight in the chest, and likewise to rheumatic pains in the shoulders and the arms.

Dissection. Passing over unimportant particulars, we may mention the following as the principal appearances observed:—

The right pleural sac contained more than a pint of red serum; the left was nearly filled up by adhesions. The lungs were tolerably sound. The heart was so dilated and hypertrophied as to be nearly three times its natural size.

"The two layers of the pericardium, universally and firmly adherent, were fleshy, rough, and of a deep red colour; and, at one spot on the upper part of the right ventricle more than an inch in diameter, was a thick cartilaginous deposit verging to ossification. The inferior vena cava was very large and turgid, but all the other vascular trunks seemed to have been compressed and reduced in size, by the contractile force of the inflamed pericardium; whilst, in consequence of the enlargement of the entire organ, their position was, at the same time, somewhat altered. All the cavities of the heart were to a considerable extent thickened and dilated, and they all contained much blood, chiefly in the state of soft, loose, dark red coagulum, intermixed with some portions which were paler, and of a firmer consistence. The lining membrane of the auricles, especially that of the left, was white and opaque, as if from an interstitial deposit of albumen. The left ventricle, which was the principal seat of hypertrophy, preserved its expanded form and dimensions when cut open, and its fleshy columns were very prominent and distinct. The cardiac

valves, on both sides, but particularly the mitral, were somewhat thickened and opaque, from incipient interstitial deposit, tending in some points to ossification. The aortic valves were in a similar state, but not to the extent of interrupting their function."

We need not add Dr. Stroud's remarks. One is so obvious as to strike every one who reads the case—the compatibility of so much enlargement of the heart with the pursuit of dissolute and intemperate pleasures. Yet this is no more than we frequently observe. Persons with extreme organic alteration of the heart, go through the avocations, and enjoy in some degree the amusements of the world. Attila, and many others, down to the late Irish comedian Connor, have died in the act of venereal intercourse, in consequence of the rupture of aneurism, or of great disease of the heart. The late Sir William Douglas walked in from Kensington to see us on the morning of the day on which he died, and there was not a symptom then observable to lead the most experienced physician to anticipate so speedy a demise.

There is one feature in the case before us which should not be altogether overlooked. The two layers of the pericardium were universally adherent. Now this patient had suffered from rheumatic symptoms, and perhaps there is no cardiac alteration so frequently, we might say so constantly, coexistent and connected with rheumatism, as inflammation of the pericardium terminating in adhesion of its layers, and finally producing, or tending to produce, enlargement of the substance of the heart itself. If a patient has been subject to rheumatic affections, especially if he has labored under acute rheumatism, and symptoms of cardiac disease are present, ten to one that disease is adherent pericardium. Such is the result of our observation.

Dr. Stroud is an active and intelligent practitioner; and these slight strictures are not intended to check his industry, but to direct his talents into the most useful channels.

FATAL DISSECTION-WOUND.

Dr. Charles Benson has published an interesting but melancholy case of this kind in the last number of our Dublin contemporary. The subject was a diligent young student, who was found by Dr. B. laboring under low fever, such as students are liable to in the first season of their dissections. He was bled, and took some saline and mercurial medicines; but the progress was unsatisfactory, and on the third or fourth day Dr. B. found him in a very dangerous state, the pulse being 120—the tongue brown—some delirium. On questioning his brother, it was found that he had scratched one of his fingers in dissection, and although there were no red lines running up the arm from the wound, yet there was great tenderness in the same side of the chest when pressed, as also below the axilla, about the clavicle, and the pectoral muscle. Dr. Colles was called into consultation, and it was now clear that the case was one of dissection-wound. The symptoms, in spite of judicious treatment made head—matter formed below the axilla. It was discharged by a puncture, but without relief. The restlessness and delirium increased, and the unfortunate youth died comatose, seven days from the time he began to complain. The affected side was swelled, and under the pectoral muscle was found some healthy pus, not contained in a cyst, but diffused through the cellular membrane. The lungs were healthy on both sides.

“In the right pleura a small quantity of bloody serum existed. The heart was healthy, but the pericardium contained more serum than usual. In the head the dura mater was sound; the cerebral layer of the arachnoid was opaque over the anterior lobes, but exhibited no mark of recent inflammation; the substance of the cerebrum and cerebellum was every where healthy, in the ventricles, however, half an ounce of colourless serum was found, but no other sign of disease.”

Dr. B. brought this case before the Surgical Society of Dublin, because the formidable disease of which it is

a specimen, appears to be still imperfectly understood. Dr. B. thinks there are not cases enough on record; but that the communications of individuals will ultimately lead to the formation of a *corpus historicum* from which inferences may be fairly drawn. To Dr. Colles, Dr. Duncan, and Mr. Travers, the profession is under obligations. Our readers are aware of the general impression that the danger from dissection-wounds is in proportion to the freshness of the subject. Some writers have averred that the peculiar constitutional fever of a poisoned wound has never resulted from the dissection of *putrid* bodies. In the above case, however, the subject was very putrid. The following are the grades and varieties of poisoned wounds from dissection, which our author has observed.

“1st. A small pustule, unattended with much pain, confined to the skin, and disappearing in a few days.

2nd. A chronic inflammation, confined to a point under the skin, causing little or no uneasiness, not suppurating, but leaving a very small hard tumor, which after remaining many months, gradually disappeared.

3rd. An erysipelatous inflammation around the wound, which slowly creeps along the finger to the hand, and remains for two or three weeks wandering about the fingers, after the wound has been quite healed.

4th. Violent inflammation of the injured part, with intense pain, followed by sloughing of the skin and cellular tissue in the immediate vicinity.

5th. Inflammation of the sheaths of the tendons, as in severe paronychia.

6th. Inflammation not confined to the part, but running along the superficial absorbents. The glands in the axilla suppurate. There is much local and constitutional suffering.

7th. The deep absorbents appear to be engaged. Some red lines may be observed on the hand; we lose them in the arm, and again we find them in the axilla, with inflamed glands going on to suppuration; high fever; intense pain.

8th. Lastly, as in Mr. J's case, the constitutional symptoms show them-

selves before the local. Fever of the typhoid character. No sign of active inflammation in the wound, but a vesicle or pustule often forms on it. Absorbents not inflamed, but there is diffused inflammation and suppuration in the cellular tissue of the pectoral and axillary regions.

This last case heretofore appeared to me to depend on the absorption of a *peculiar* animal poison, generated, in some way, at or about the time of death, and losing its specific virulence when putrefaction occurred. The others, I conceived, arose from an irritating substance of no specific nature, and assumed their different characters from the texture wounded, the irritating qualities of the matter introduced, or still more from the state of the patient's health at the time of the injury, and the peculiarities of his constitution."

Our author asks what is the plan of treatment which should be adopted in cases like the one here related? Should it be the stimulant or the antiphlogistic?

DR. GRAVES' REMARKS ON DROPSY,
WITH A CASE IN ILLUSTRATION.

"One of the patients, J. Austin, states he has been ill two months before he came into hospital, and acknowledges that his illness was the result of long continued habits of inebriety. Careless and intemperate in his mode of life, and frequently exposed to cold and wet, he got an attack of bronchitis, accompanied by a sense of constriction about the chest and difficulty of breathing. He was bled for this, and states that the bleeding relieved his dyspnoea; but about this period he remarked that an anasarcaous swelling appeared in his face, neck, and chest.

In this case, gentlemen, we have a specimen of the ordinary history of dropsy in this country:—first, intemperate habits, next exposure to cold, followed by bronchitis or pneumonia, and then dropsy commencing in the face, chest, and upper extremities. I

have on a former occasion pointed out to the class the importance of observing in what part of the body dropsical swelling first appears, because, by doing so, we obtain a more accurate idea of its nature, and are furnished with a clue towards discovering its source. Dropsy is generally the consequence of organic disease of some deep-seated viscus. When it is produced by thoracic disease, as bronchitis, pneumonia, or affections of the heart, it is said that the swelling always begins in the face, neck, trunk, and upper extremities; when it depends upon chronic hepatitis, disease of the spleen, obstruction of the system of the vena porta, or disease of the mesenteric glands, the swelling commences in the abdomen, and then proceeds to the lower extremities; but when it arises from mere debility, the consequences of hectic fever, long-continued diarrhoea, or a cachectic state of the system, the effusion is first observed in the lower extremities, coming on in the evening, and again disappearing towards morning. The history of dropsical swellings, therefore, by informing us in what part they first appeared, is often sufficient to indicate the general nature of the producing cause.

When this man came into the hospital, his cough had disappeared, and there was not any unequivocal symptoms of disease of the heart, but he had considerable dropsical swelling of the face, chest, and superficial parts of the abdomen; his appetite was bad, and on examining his urine we found it loaded with albumen, and of the specific gravity of 1029. Though he had no fever or dyspnoea at the time, we commenced the treatment by general bleeding, because he was a person of rather robust constitution, and on account of his dropsy having originated in cold. In persons who are able to bear bleeding, and where the disease has commenced in an acute form, you may often commence the treatment of dropsy by a single bleeding with great advantage, even though there be no fever or local inflammation present. We next prescribed an aperient injection, to be followed by a vapour bath.

I then, by way of trial, gave him an electuary containing some diaphoretic medicines, and found that it acted well on the skin, and that sweating could be easily induced. This furnished me with a key to the after treatment. Whenever you find that sweating can be easily brought on in dropsical cases, you should obey the hint given by nature. You should not under such circumstances have recourse to mercury, or hydragogue purgatives, or diuretics; you are to open the passage which nature has pointed out, you are to encourage diaphoresis, and you may rely upon it that you will in this way effect an easier, safer, and more permanent cure than you could by any of the various modes employed for similar purposes. We therefore gave this man a powder containing four grains of Dover's powder and five of nitrate of potash three times a day. The Dover's powder is tempered by combining it with nitrate of potash, which is an antiphlogistic, and prevents the former from exercising a heating effect on the system. Having continued these powders for seven or eight days, we commenced the exhibition of opium in doses of half a grain four times a day, to be increased after a few days to half a grain every fourth hour. Under the use of vapour baths used daily, and opium to the amount of three grains in the twenty-four hours, the man has improved wonderfully, and the dropsical swelling is fast subsiding. Opium has here, you may have remarked, produced no bad effects. The tongue is neither dry nor furred, and it has not any of that appearance which is observed in persons who are in the habit of taking opium; his appetite is unimpaired, his bowels regular, and his strength undiminished.

Now why did I give opium in this case? The more advanced students will perceive that I have treated it nearly in the same way as I treat cases of diabetes; because I have taught, and have been the first to teach, there seems to be an analogy between chronic dropsy and diabetes, and because experience has proved to me that this

mode of treatment is most likely to be attended with success. I shall not dwell on this point at present, as I have already published a paper on it in the *Dublin Medical and Chemical Journal*, to which I refer you, merely observing here, that opium and other diaphoretics increase strength, remove the dropsical swelling, diminish the quantity of albumen in the urine, and bring on convalescence without producing any bad effects on the head or digestive system. Dr. Osborne, Dr. Gregory, and Dr. Bright have asserted that the presence of albumen in the urine arises from a particular disease of the kidney, in which the whole texture of the organ is altered, it becomes hypertrophied, finally harder than natural, and of a pale yellowish colour. On the other hand, Dr. Elliotson, Dr. M'Intosh, and myself, have opposed this view of the question. It is true that this kind of kidney is sometimes found to exist with an albuminous state of the urine, but this is by no means invariably the case. I have seen many cases of albuminous urine which yielded completely to the exhibition of opium, and this surely could not happen if organic disease were present. And though the cases in which this has occurred are not very numerous, still the evidence is good, and it cannot be denied that such a state of the urinary discharge may and does depend on constitutional causes totally independent of disease of the kidneys. I have very little doubt that it is to such an origin the present case is to be referred, and I feel confident that we shall cure it with opium. I am anxious that you should attend to this case and watch the result, for the treatment is quite different from that employed by others. I say this without meaning to claim any originality, but I may be permitted to say that it is a mode differing very much from those generally pursued. It cannot be used in cases where fever or local inflammation is present, but when the local and general excitement has been subdued, or when the case is chronic and unaccompanied by quick pulse, or any symptoms of visceral inflammation,

it may be employed with safety and advantage.”*

CREOSOTE.

As this powerful stranger, which has lately made its way into therapeutics, is occasioning considerable curiosity, we shall here introduce an account of its properties, mode of preparation, and medicinal agency, from a recent edition of Dr. Gully's "FORMULARY OF NEW MEDICINES," published by Churchill.

"The name of this new remedy is derived from the Greek *κρέας*, flesh, and *σώζω*, to preserve. It was discovered last year by M. Reichenbach de Blansko in pyroligneous acid, in the first instance, and subsequently in the different kinds of tar.

In the process which led to the discovery of creosote, M. Reichenbach found that his fingers were deprived of their epidermis, and he conjectured, from this vehement action on organic matter, that this substance might be the mummifying principle of pyroligneous acid, and might also serve an important therapeutical purpose in the living body. This explanation has since been realized.

Physical Properties of Creosote.

Creosote is an oily, colourless, transparent liquid, of a penetrating odour, resembling that of smoke, or smoked meat, and of a burning and exceedingly caustic taste. It has a specific gravity of 1.037.

Chemical Properties.

It boils at 203° Centigrade, and is not congealed by a cold of—27° C. it burns with a strongly fuliginous flame. With water at 20°, it forms two combinations, one a solution of one part in 80, and the other of 10 parts in 100. This aqueous solution does not change turnsol, nor is it neutralized by acids or alkalis. Nitric acid causes red vapours.

A small portion of concentrated sulphuric acid turns it red, but a larger quantity blackens it, the acid itself being also decomposed. Acetic acid seems to be its specific solvent, for it holds any quantity of it. All the acids, even the carbonic, separate cresote from its combinations with potass and soda, without otherwise affecting it. It dissolves a great number of salts, some with, and some without heat. Alcohol, ether, carburetted sulphur, and acetic ether combine with it in any proportion. It decomposes or dissolves resins, resinous colouring matters, and other similar substances.

Shaken with white of egg, coagulation immediately takes place. Fresh meat, soaked for an hour in a solution of cresote, and then dried, may be exposed to the sun, without fear of putrefaction; in a week it becomes hard, has the smell of smoked meat, and becomes reddish-brown. Fish may be preserved in the same manner. Birds poisoned with creosote, remain nearly two months without emitting any putrid odour.

These effects on animal matter closely resemble those of pyroligneous acid and tar-water, and demonstrate almost to a certainty that creosote is the preservative principle of those fluids. This, however, has been further shown by the extraction of creosote from both of them. I shall confine myself to the preparation of creosote from tar, as it is procured more abundantly, and by an easier process, from that substance.

Preparation of Creosote.

In the dry distillation of tar from wood, the fluid collected in the receivers contains an empyreumatic acid water, which is rejected, and oil of tar, which is placed in glass retorts and rectified. In these two distillations the oil of tar is at first light, but as the heat is increased, its gravity augments. At one period of the process the oil sinks to the bottom, and a fluid which is poor in creosote, and consists mostly of *eupione*, and other substances that interfere with the purity of the creosote, floats above it: this is poured off, and the pale yel-

* London Medical and Surg. Journal.

low tar-oil is heated. Carbonate of potass is added, until the carbonic acid is no longer disengaged on shaking; the mixture is decanted, in order to separate the acetate of potass, and the oil is again distilled in a glass retort, and all the first products that float on the water are rejected. The oil is then dissolved in a solution of caustic potass of the specific gravity 1.12; heat is thereby developed, and a portion of the materials composed of eupione, &c. not being dissolved, floats on the surface, and is removed. The alkaline solution is poured into an open capsule, and regularly heated to boiling. It rapidly absorbs the oxygen of the atmosphere, whereby a peculiar oxidizable principle in it is decomposed, and the mixture then turns brown. After cooling in the open air, diluted sulphuric acid is added until the oil is set at liberty. It is then distilled with water, holding a little caustic potass, and the whole is kept boiling until the quantity of oil which passes from the retort becomes diminished; at this point the distillation should cease. The oil and water in the receiver are again distilled with potass, and the same treatment with sulphuric acid repeated, as in the former instance. A third distillation is then made, and a little phosphoric instead of sulphuric acid is added, in order to take up some ammonia retained in the oil.

The oil is then for the third time dissolved in caustic potass, and if the preceding processes have been carefully managed, they combine, without leaving any residue of eupione, and the mixture, on exposure to the air, does not turn brown, but takes on a slightly reddish tint. As long, however, as any eupione remains, and the mixture turns brown, the solution in potass should be repeated. In this state, the creosote is not entirely pure, but it may be used for medicinal purposes.

It may be obtained perfectly pure by distilling it with water alone, then rectifying the product of the distillation repeatedly, until no water passes over when the heat is raised to 203° C. The last product is creosote unalloyed by eupione, picamare, water, or other matters.

M. Reichenbach endeavored to simplify this tedious process; but he found that the product was always unfit for internal use, while its action on the surface was much impaired. So procured, its emetic effects were most violent; a single drop applied to the tongue caused in the space of a minute, excessive nausea with tremors, succeeded by vomiting, and great prostration of the powers. These effects he attributes to the presence of eupione, and he therefore recommends the process above-described to be followed on all occasions.

Physiological Action of Creosote.

Applied on the tongue in a concentrated form, creosote causes violent pain, though no redness or tumefaction is present: a strong taste of smoke extends to the throat. Poured on the skin, it produces a burning sensation with rubefaction and erosion.

Flies, spiders, and small fishes die in the course of two minutes, when immersed in a solution of twelve drops of creosote, in two ounces of water.

Two drachms given in half an ounce of water to a puppy-dog induced the following symptoms; complete prostration of muscular power, drooping of the head, fixation of the eyes, vertigo, apparent stupefaction of all the senses; the respiration, from being laboured, was at the end of three minutes almost entirely stopped by an abundant secretion of viscid, filamentous mucus; to which was added vomiting of whitish milky fluid, with spasmodic contraction of the abdominal muscles. These symptoms got gradually worse for two hours, the respiration becoming more laborious, and at longer intervals, the limbs being seized with tremors, then with convulsive contractions, and the whole ending in death.

On opening the body of the animal, all the tissues of the body, except the liver, exhaled a strong odour of creosote. The mucous digestive membrane gave signs of inflammation throughout its whole extent; the matters contained in the stomach coagulated white of egg, and, heated, gave out the powerful tar-smell of creosote. In the heart and

the immediate great vessels the blood appeared to be much more firmly coagulated than usual. The lungs were gorged over the greater part of the extent with reddish-brown blood; the more ruddy parts of them floated in water readily: the darker portions scarcely swam at all. No sign of congestion about the brain appeared.

On injecting equal parts of creosote and water into the carotid artery of a dog, the same symptoms were produced, but death ensued more speedily.

If concentrated or diluted creosote be added to blood, the latter thickens and becomes reddish-brown, with small spots of white, probably coagulated albumen: on further exposure to the air, the blood passes to a yellowish-red colour.

The signs of poisoning with creosote, therefore, are the redness of the gastrointestinal mucous membrane, the peculiar thickness and colour of the blood, the property possessed by the matters in the stomach of coagulating albumen, and more especially the peculiar odour exhaled by all the tissues of the body.

Plants watered with a solution of creosote, fade and die in the course of a few days.

Medicinal Employment.

M. Reichenbach's first essays of his newly-discovered remedy were made on slight burns, infantile excoriations, and wounds. Subsequently he was induced to try it in extensive burns by hot iron and boiling fluids: in itch and various kinds of tetter: in gangrene consequent on extensive compound fracture of the leg: in caries of the phalanges of the fingers and toes; in tooth-ache, though it fails to put a stop to the caries of the tooth: in open, fungous whitlow; in scrofulous ulcers of the throat, leg, and joints of the fingers: in ulcerated white-swelling of the knee of two years' standing; in chancres and other syphilitic ulcers: in wounds from cutting and piercing instruments, caustic alkalis, &c., in which cases the wounds did not cure by suppuration, but by actual desiccation caused by the creosote. In all

these instances he has found the remedy most effectual and astonishingly rapid in its operation. Thus in a case of old-standing and scrofulous ulceration of the throat, with purulent discharge from the ears, the ointment of creosote to the former, and the injection of creosote water into the latter, put an end to both in the course of three weeks.

Internally, M. Reichenbach has given it in several cases of hemoptysis; in two of these, the sanguineous expectoration had continued for upwards of a week, when the administration of four drops of creosote, on sugar, daily for four days, arrested the flow of blood.

Turning to the practice of the French physicians, we find that creosote has been successfully employed in burns by Berthelot and Goupil, who observe, that in treating these with creosote, the tendency to cicatrize from the circumference to the centre, and the consequent contractions and irregularities, are avoided; in various dry and moist tetter by Goupil, Coster, Berthelot, Martin-Solon, Duchesne-Duparc and Dauvergne: in chancres and old venereal ulcers, by Künckel, Lesseré, and others; in sanious ulceration of the cervix uteri, by Colombat: in a cancerous ulcer of the nose, by Breschet: in chronic inflammation with suppuration of the edges of the eyelids, by Coster: in cancer of the womb, by Hyppolyte Cloquet and Tealier: in varicose, ill-conditioned ulcers of the leg, by Goupil, &c. Chilblains are also considerably benefited by frictions, with creosote ointment or water. M. Regnard, of Paris, among many other patients, had the good fortune to relieve the gifted Broussais from an excruciating tooth-ache, by the free application of concentrated creosote to the carious tooth; we cannot wonder that the worthy professor should be an advocate of the doctrine of 'irritation.'

As this application of creosote may be of more extensive and familiar use than many others, it may be well to inquire how it acts as a sedative in this instance. When the teeth are painful it is almost always because the nervous pulp near to the root is exposed to the

contact of the air. If in this circumstance a few drops of undiluted creosote are applied, a fierce increase of pain is the first effect, then a total cessation of it: in this, either the nervous pulp is destroyed as by some caustic; or the creosote, by coagulating the albumen of the fluids that are always flowing from the caries, forms an albuminous layer that defends the pulp from the air; or lastly it acts as a powerful stimulant, causing the inflamed vessels of the pulp to contract and expel the load of blood by which they are oppressed. In any case the pain is apt to return, and this fact is only explicable by one of the two latter suppositions; for so long as the irritating cause, carious bone, remains, so long are the vessels of the pulp liable to relapse into their former congestion.

Creosote has been employed by the French physicians in pulmonary phthisis, but from all that I have read on the subject, the alleged successful cases are strained, and should not be recorded as such. It has not been more successfully used in several cases of chronic bronchitis by inhalation.

British practitioners have not as yet essayed the effects of creosote, and indeed this is too often the case with regard to new remedies. My friend, Dr. Copland, however, is an exception to this rule; he tells me he has employed it in cachectic affections as a tonic, and also in dropsical cases, where it has proved diuretic. In two cases of diabetes, he considers that he was not allowed to make a fair trial of it. The dose he gives is generally from 1 to 8 minims three or four times a day, combined with powdered liquorice root, into pills. In porrigo favosa, he has used a lotion of a saturated solution of creosote with good effect.

My own experience of the effects of creosote is as yet confined to cases of scrofulous ulcers of the leg, tooth-ache, lumbago, and aphthæ. In the first case, of ulcers, I premised a seton in the arm, and the rapid desiccation of the ulcers caused by the creosote had no ill consequence on the brain or any other viscus. In tooth-ache I have verified the reports above alluded to. In

the case of rheumatism I found the remedy at first produce distressing nausea, but the warm and copious sweat that ensued soon compensated for that symptom, and effectually removed the rheumatic pain; copious diuresis was also one of its effects.

In a case of extensive apthous ulceration of the mouth occurring in an adult, I employed the following wash with the greatest advantage; the sloughs came away after the second time of washing, and the depressions in the mucous membrane filled up with astonishing rapidity; several of the ulcerated surfaces were as large as half of a sixpence.

Creosote 1-2 a drachm
Gum Arabic mucilage, 1 1-2 ounce
Camphor Mixture . . 10 1-2 ounces
Mix.

To wash the mouth every two hours.

Mode of administering Creosote.

M. Reichenbach says, that his observations demonstrate that in the cure of certain ulcers, tetter and wounds, creosote water was sufficient. But it should be remembered that water does not dissolve more than about 1-80th of creosote—a proportion that will be found most inefficient in the generality of obstinate cases of ulceration. In such instances the employment of pure creosote becomes necessary.

The application of concentrated creosote to ulcers, causes, in the first instance, more or less of inflammation, which, however, quickly subsides; as soon as this inflammation appears, the remedy should be discontinued for a few days, and the wounds allowed to remain quiet. The application is then renewed with similar consequences; and this is repeated until the bad condition of the ulcer is changed, that is, until the greenish pus becomes white, the blue or white flesh becomes red, and firm granulations fill up the solution of continuity. Creosote should therefore be employed more freely at the commencement than at the close of the treatment of these cases. When the ulcer has taken on the appearance

above described, it will suffice to dress it with the creosote ointment, or water, or even desist altogether from its use, and introduce other desiccating remedies.

The best mode of applying it, is by means of a camel-hair brush to paint the surface of the sore; or from five to a dozen drops may be placed on the surface of a poultice, and this applied over the diseased point.

When used to stop external hemorrhages, it may be poured by drops into the wound; but in these cases it seems to act with more certainty if imbibed by cotton or lint, and thus applied.

To form a lotion for the employment of frictions, from two to eight drops are added to each ounce of distilled water. Creosote ointment is made of ten drops of that substance and one ounce of lard: it may be used either to dress ulcers or to rub into the sound substance.

The internal administration is either in draught or pill; the former being composed of one or two drops of creosote dissolved in camphor mixture; the latter of the same quantity and some absorbent powder with mucilage. This dose may be repeated three or four times a day, and may gradually be increased to eight drops.

The inhalation of creosote is effected, first, by steeping paper in it and placing this in approximation with the nostrils; next, by heating the creosote in the immediate neighborhood of the patient, so that he cannot fail to inhale the fumes: or, lastly, a portion of it may be poured into hot water in a Mudge's inhaler, and the creosoted vapour inspired in the usual manner.

It should not be continued internally for too long a period, for it is apt to produce irritation of the system and pains of the stomach and intestines. Demulcents should accompany its employment, and should occasionally replace it.

From all that I have advanced concerning the therapeutical properties of creosote, the following general conclusions may be made.

1. That creosote is beneficial in the different stages of burns.

2. It cures the majority of herpetic, furfuraceous, squamous, and crustaceous skin diseases.

3. It cicatrizes obstinate syphilitic ulcers, prevents or diminishes suppuration, and destroys the fungous growth without injuring the surrounding tissues. It also corrects the condition of cancerous ulceration.

4. In phthisis and bronchitis, though it fails to cure either, it facilitates greatly the expectoration.

5. Chronic lymphatic tumours are frequently dispersed by frictions or fomentations of creosote.

6. It is almost always successful in allaying the pain of carious teeth, but does not prevent its return nor the progress of the caries.

7. It arrests capillary hemorrhage with remarkable certainty, but fails in that from the large vessels.

8. It is an effectual remedy in atonic rheumatism, and may be tried with chance of success in cachectic disorders."*

OCCLUSION OF THE BILIARY DUCTS.

In several numbers of this Journal, we have noticed this portion of pathology. In the fifth volume of the *Calcutta Transactions*, we find a few cases of the disease in question, and which we consider to be worthy of notice.

Case 1.—Keating, aged 28, a slight made and delicate European, who had been employed in Bengal for several years as an Indigo-planter, came under my care on the 18th March 1828. He had been suffering from slight pyrexia, and constipation for two days; there was general tension of the belly, and enlargement of the liver, with pain in that organ, and at the right side of the neck. Leeches were repeatedly applied, and mercurial purges administered, which operated very freely; and the mouth was affected by the calomel on the morning of the 20th March. The

* "I believe that Mr. Morson, of Southampton Row, is the only manufacturer of creosote in London."

pain in the right side was moderated, but the liver remained large. Either Aloes, Castor Oil, or Senna and Salts were given daily, until the 4th April, so as to keep the bowels very free. He had then a return of occasional pain in the right hypochondrium, and at the right side of the neck; his mouth having not quite recovered from the effects of the calomel, he was ordered to take Blue Pill, Colocynth, and Aloes, every night.

On the 7th April, there was some pain in the region of the gall-bladder, in consequence of which, leeches were again applied daily, until the 11th, when the pain had nearly subsided. A slight enlargement of the spleen was now observed, and it continued progressively to increase until he died, on the 4th of July.

He suffered during this period from frequent returns of fever; and latterly had a troublesome cough, with mucopurulent expectoration, and difficult respiration, from the encroachment of the spleen, on the left side of the chest; the enlargement of the liver having entirely subsided. After the spleen began to enlarge, the use of mercury was suspended, and his treatment consisted in the repeated application of leeches, and the exhibition of purgatives, with Quinine, when required by returns of fever. All the remedies usually employed in cases of tumid spleen, were tried, with careful attention to diet, but without effect.

On dissection, the liver was found diminished in size; of a livid red color, inclining to brown: its consistence was soft and doughy. Some concretions resembling yellow soap, were found in the *pori biliarii*. The cystic duct was obliterated, a mere membrane of extreme tenuity remaining in its place; so that we may believe this morbid change to have been of long duration. The gall-bladder was shrivelled, its coats thickened, and it contained a small quantity of dark colored thin paste, like a mixture of charcoal and oil; insufficient in quantity to distend the diminished gall-bladder, which, therefore, had the lax shrivelled appearance just noticed. There was

abundance of yellow bile in the duodenum. The spleen was much enlarged, indurated, and friable in texture."

It was ascertained that this man had had ague in the preceding Jan. attended with cough and tenderness of the epigastrium, which was relieved by bleeding and purgatives. The enlargement of the spleen appears to have swelled when the liver subsided.

Case 2. Macan, aged 20, and delicate, arrived from England, 20th May, 1829, having then a disease of the knee-joint. While in hospital for this, pulmonary disease became developed, and abscess of the liver was formed, of which he died on the 7th of September.

On dissection, a great many organic lesions were found in the lungs, liver, mesentary and intestines. The cystic duct was completely impervious. The patient passed black or green stools for several days about the middle of August, and therefore, Mr. T. observes, the colour could not have been owing to cystic bile. The fact is that the bile changes color, while passing along the alimentary canal, by mixture with various matters, and especially acids. Many morbid secretions, too, are considered to be bile, when they have no claim to the title.

Case 3. In this case, that of an intemperate female with greatly enlarged liver, the latter organ was granular, and easily lacerable—and the *hepatic* duct was found impervious, being "degenerated into a minute film of membrane." It is curious that in this case there was no jaundice. What could have become of the bile that was secreted? It is very probable that, in such cases as these, mercury would be injurious, by stimulating the liver to increased secretion, when there was no outlet for the bile.

Case 4. In January 1831, our author was requested to see a man who had been, for six years, addicted to drunkenness, and, for the preceding six months, had hardly ever been sober. He was 44 years of age—pale, and

emaciated. He appeared to be exhausted by disease, but without any tangible or visible malady. He only complained of uneasiness in his belly, for which some colocynth and blue pill were given. It was reported that the stools were dark and glutinous. He died in eight days after this.

"On dissection, some old adhesions were found in the right side of the chest. The liver enlarged and indurated; the convex surface rough and tubercular; its texture hard, granular, and tough; in color and firmness, not unlike boiled cow's udder; being of a pale yellow color, with slight pink tinge, and bleeding little when cut. The intestinal extremity of the ductus communis choledochus, obliterated for 1 1-2 inches; gall-bladder large and lax, contained 3 ii ss. of pale yellow fluid, like glue. The peritoneal surface of stomach and intestines pale, and void of vascularity; the interior of reddish brown color, and covered with tenaceous viscid mucus, of the same color. Root of mesocolon and mesentary very vascular, and ecchymosed in some parts."

The most remarkable thing here is the total absence of jaundice, notwithstanding the complete obliteration of the ductus communis! This is inexplicable—unless we suppose that no bile was secreted in the liver—a thing hardly credible.

Case 5. This was also a drunkard, 45 years of age, and nineteen years in India. He was brought to the hospital labouring under ardent fever, of four days' duration. He was jaundiced—belly tumid—symptoms of delirium tremens. Antiphlogistic treatment was employed, but he died in three days. On dissection, there were morbid appearances in the head, the consequences of the fever. The gall-bladder was small, flaccid, and covered by a false membrane. It contained about a spoonful of thick black bile, like tar. The cystic duct was closed throughout its whole length. The hepatic duct was large, and contained thin bile, of a pale color. There was much of this kind of bile in the duodenum.

OBSERVATIONS ON THE OBSTETRIC EXTRACTOR—THE INSTRUMENT USUALLY CALLED THE MIDWIFERY LEVER. BY JOHN BREEN, M.D. formerly Assistant to the Dublin Lying-in Hospital.

This paper is published in our respected cotemporary of the *Sister Isle*, avowedly in consequence of a paper read by Dr. Churchill, at the College of Physicians (Dublin), on Instrumental Delivery, from which was excluded all allusion to the lever. In the opening of the paper, Dr. Breen points out some numerical mistakes in Dr. Churchill's paper, and then he proceeds to a concise but rather full history of the forceps and vectis, from the time of the Chamberlens, in the latter part of the seventeenth century, down to the present time.

It appears that, within these few years, the lever has risen in the estimation of accoucheurs. Dr. Blundell considers it a safer instrument in the hands of general practitioners than the forceps.

"I have been (says Dr. Breen) in the habit of using the obstetric extractor for twenty-nine years, not as a lever of the first class, but as an extractor in the way mentioned by Dease. The instrument I have always used is that usually called Lowder's lever. When the hinge with which it is provided, for the purpose of being more conveniently carried in the pocket, is fastened by the pivot, this extractor is twelve inches in length. The handle, which is steel on its inner part, and partly ebony on its outer, is five and a half inches long. The blade, before being curved was rather more than seven and a half inches. This, I believe, gives as great a degree of curvature as is consistent with the facility of introduction, and affords considerable extracting power. It is what artists call fenestrated at the extremity of the blade, or it has an oval aperture there, for the purpose of giving a greater number of points of contact with little pressure. The instrument has its greatest breadth, one inch three quarters, at the widest part of this oval. The descrip-

tion need not be more minute, as surgical instrument makers are sufficiently familiar with the construction of Lowder's lever."

Again:—

"To justify the use of the obstetric extractor, it is necessary that the pelvis be not materially deformed, that the os uteri be fully dilated, or very nearly so, and that the os externum be in a yielding state. I have proved in a former dissertation, that unless accidental occurrences, such as rupture of the uterus, puerperal convulsions, hæmorrhage, or other rare contingencies take place, we may wait with safety thirty hours for the condition of the parts above described, and use appropriate means during the interval to promote such a condition. I would here observe, that though the safety of delaying instrumental aid for thirty hours be proved as a general proposition, it by no means follows, that the obstetrician should always put off affording extraordinary aid for that period."

We are tempted to make another, and rather a long extract, on the application of the lever in actual labour.

"In the most frequent vertex presentation, where the labour has made some progress, and where the os uteri is dilated entirely, or nearly so, the posterior fontanelle is found to the left of the pelvis, near the left acetabulum, the sagittal suture traversing the pelvis obliquely, the anterior fontanelle generally higher than the posterior, in the majority of instances corresponding to the right sacro-iliac syncondrosis, shewing the chin to be bent on the chest. In this case the right parietal bone is the part of the foetal cranium which is lower than any other. The head is propelled downwards with a rotatory motion from left to right, and generally expelled before the base of the occipital bone is moved completely round to the arch of the pubis. This last statement is not quite in agreement with the more general description of authors, but I am satisfied future and attentive observations will confirm Professor Naegle's views on this point. In this most favourable presentation the uterine ac-

tion is occasionally for hours exerted in vain from causes which we are frequently unable to account for. Much delay may excite fears for the safety of the child, and lay the foundation of a tendency to inflammation in some of the soft structures of the mother, indicated by some or several of the following symptoms: increased frequency and fullness of pulse; tongue loaded in its centre; secretion of urine diminished, and becoming higher in colour, sometimes requiring to be drawn off by the catheter; countenance assuming an anxious aspect; stomach irritable; general increase of restlessness. This state of things, not an imaginary fiction, but one which I have witnessed, allows me an opportunity of describing how the obstetric extractor should be applied under such circumstances. The instrument can be passed with the greatest ease, as the patient lies on her left side, in the direction of the hollow of the sacrum, more to the right of the pelvis, than to the left, it is to be carried forward under the right ischium, and cautiously passed until the extremity of the instrument reaches the base of the cranium, somewhere near, but beyond the mastoid process of the temporal bone. Were I giving a lecture to mere tyros, I should be under the necessity of laying down the process by which the relative direction of the occiput to the pelvis might be ascertained. Writing for practitioners, I take for granted, that they possess this very necessary preliminary information. Yet it may be useful to recommend the operator, before introducing the extractor, for fear of mistake, to reconsider the view he has taken of the position of the foetal head, on the accuracy of which his success must depend. Should he have formed his judgment before the cranium has escaped from the cervix uteri, the contraction of this organ on the easily compressible anterior fontanelle, will frequently lead the hasty or less experienced to mistake this for the posterior. This contraction affords an explanation of the hitherto prevailing error, as to the great frequency of the occurrence of the first position of Bau-

delocque, particularly as compared with his fourth. The influence of this sphincter-like action is well illustrated by the certainty with which we sometimes ascertain the anterior fontanelle, when the membranes, rigid and unbroken, contain a large quantity of liquor amnii, the interposed fluid taking off the pressure from the cranial bones. Should he, as it were, wish to check his opinion, founded on the situation of one of the principal fontanelles, by finding the direction of the helix of the ear, which is always towards the occiput, let him recollect, that if, in examining, his finger change the direction of the helix towards the forehead, the head is always sufficiently pressed to the pubis to retain that appendage of the cranium in the irregular situation which the search for its direction may have placed it in. When called on after violent labour has lasted many hours, and that there is considerable cranial tumour, this precaution will be found useful, and as far as I know, it, as well as the *cause* of the common mistake of the great frequency of the first position, is now first communicated to the profession.

The operator should now gently use some force, to ascertain if he have a purchase. He must then during a pain draw downwards, and in a direction from left to right, to bring the occiput from the left of the pelvis towards the symphysis pubis. By this mode of action the head can generally be brought to commence the distending of the perinæum, and the remainder of the process be left to nature. This power of *readily* withdrawing the extractor before the final expulsion of the head, is a most incalculable advantage; I am satisfied the injury done to the perinæum, when the forceps are used, and which is so much dreaded by all experienced obstetricians, is universally produced by the rapidity of the expulsion of the head after the chin departs from the chest, and the difficulty, or often impossibility, of withdrawing the forceps with sufficient quickness to allow our undivided attention to be applied to the care of the perinæum. On this subject, the opinion of Madame Lacha-

pelle, whose opportunities of observation were unequalled by any writer of the present day, is so much to the point, that I feel pleased in having her authority to support my views. She says, vol. i. p. 46:—"In the last period of labour, it (the forceps) will determine almost inevitably this rupture (that of the perinæum), if care be not taken to withdraw it some moments before the complete termination." In this position of the head I have sometimes found, that the extractor, applied as I have just pointed out, did not seem to act, as it were, favorably on the part on which it was placed, and it has struck me, that the expelling power had forced the right parietal bone too low, in proportion to the remainder of the head, and that the power of the uterus still acting on this part was acting in vain. Whether my view be correct or not, I have certainly succeeded in such cases by removing the extractor to the opposite side, and with a very slight degree of force applied to the head, giving that part a direction downwards, and from left to right, effected the delivery. When the head begins to distend the perinæum, I always withdrew the extractor and leave the expulsion to nature, by which it is generally accomplished; very rarely in such a case the pains again become unavailing, and require the renewed application of external aid. The head is now so low, that a very slight extrinsic force added to the uterine action, however slight this may be, will disengage it. I never met an instance where the instrument passed obliquely across the bottom of the pelvis, the handle to the left, the other extremity towards the opposite ischium, in which a very slight exertion of power, directed to move the forehead from the hollow of the sacrum, did not disengage the head."

We think our obstetric brethren, a pretty numerous class of readers, will not grudge the time spent in perusal of these extracts from the paper of an experienced practitioner.

OBSERVATIONS ON LEPROSY AND PSORIASIS.

By C. W. PENNOCK, M.D.*

Great attention has been directed for some years past to cutaneous diseases. Practitioners of every grade are becoming aware of the necessity of studying their various characters, and discriminating their several kinds. Yet still much obscurity prevails, even among scientific men, with respect to their distinctions, and no little confusion undoubtedly exists in the minds of too many members of the profession with reference to their treatment. As a general rule we may say that at present there is too great a leaning to the employment of specifics, and too little confidence in the application of those general principles of treatment, which probably exert almost as much influence on the diseases of the skin, or at least on the states of system, that produce them, as on other maladies, the general management of which is understood.

The publication of cases of affections of the skin in periodical publications has not been sufficiently adopted. Cases published in this manner become more familiar, and bring the characters of disease and its treatment more home to the mass of professional men, than the formal contents of elaborate works can ever do. Experience obtained by the observation of individual cases, and perhaps the best substitute for such experience, or rather for the mode in which it is acquired, is the record of cases of a similar description. We purpose, therefore, to lay before our readers such facts and observations as appear from time to time in monographs or in other journals, facts and observations which may seem adapted to increase the general amount of information on the subject of cutaneous maladies.

The paper before us contains the result of the observations of Dr. Pennock, in the Hôpital St. Louis. At that hospital the student enjoys the oppor-

tunity of listening to the clever fancies of Alibert, and the valuable lessons of Bielt. He enjoys, also, another and a far superior advantage, the power of watching a great number of cases, of studying Nature on a splendid scale. Let us now introduce our author, and his facts to the notice of our readers.

The paper is confined to the elucidation of the characters and treatment of leprosy and psoriasis. In order that no misconception should occur, we should explain the sense in which those terms are used.

"Leprosy, in accordance with the definition of Willan, signifies a cutaneous squamous affection, characterised by round patches, raised on the borders, depressed in the centre, from which exfoliations of diseased cuticle take place, independently of any vesicular or pustular formation.

This disease makes its appearance by the formation of slight elevations resembling enlarged papillæ of the skin, which are firm and solid, and which are covered with thin dry scales; small circular and raised patches of diseased surface form; the central portion soon becomes healthy, leaving raised circles of morbid structure of the skin."

"Psoriasis bears so striking an analogy to leprosy, that both have been considered as being essentially the same disease. In each the commencement is by small and hardened elevations, covered by thin, dry scales; the causes producing them are the same, and the only important differences existing between them, are the varieties of figure. In confirmation of the truth of this position, it may be observed, that spots of leprosy corresponding with the description of Willan, are frequently seen intermixed with those of the irregular patches of psoriasis."

Eight cases are detailed, and remarks on the general and distinctive features of psoriasis and leprosy are appended to them. The majority are instances of psoriasis, but we shall take those of leprosy first.

CASE 1. *Leprosy Vulgaris*—cured by the *Homœopathic Treatment*—Relapse at the end of five months.

* Amer. Journ. of Med. Sciences. February, 1835.

A locksmith, æt. 21, entered l'Hôpital St. Louis, in March, 1833. The legs, arms, head, presented an eruption in the form of small scales on a red base, which was slightly raised above the level of the skin; these scales were dry, and of a white, shining, micaceous appearance. The elevations were circular, and varied in diameter from two lines to half an inch; they were equally raised in the centre, as at the circumference, and touched each other at their outer border. Their appearance was that of psoriasis guttata. They covered the back, breast, and the external part of the superior and inferior members. The disease had commenced in March 1832. It then resembled the present affection; in three months it was removed by sarsaparilla, alkaline and sulphur baths, and the internal use of pills of some sort. In July 1832, the disease returned and continued till the time of his admission.

It was now treated homœopathically. The patient was ordered a solution containing a millionth part of a grain of arseniate of potash, which was prepared in the following manner:—A grain of the arseniate of potash was dissolved in an ounce of water, which contains six hundred drops; one of these drops containing one six-hundredth of a grain, was put into an ounce of distilled water, of which one drop then contained one thirty-six hundredth of a grain of the salt, and thus the dilution was proceeded in, until the minute dose of a millionth part of a grain was obtained.

The patient was interrogated each day respecting his feelings, the state of the secretions, &c.; in a word, as regards his general health. No perceptible effect was produced, yet notwithstanding this, the patches became smaller, the desquamation ceased, and on the places which had been affected by the disease, circles were seen, where the skin was grayer than that of the healthy parts, but without being either raised up or depressed; these spots rapidly became paler, and the patient left the hospital on the 3d of June, completely cured. He had taken during his residence there, one eight-thousandth part of a grain of arseniate of potash."

On the 2nd December 1833, the patient returned with small circular spots of psoriasis on the scalp and back.

The preceding case may be made a present to the homœopathists. Those who are disposed to believe that one eight-thousandth part of a grain of arseniate of potash removed the patches of lepra, will, no doubt, be gratified with the issue of the case. The incredulous will display their usual scepticism, and hold in contempt the folly or the knavery of the disciples of Hahnemann.

We suppose that Nature may safely be allowed the credit of doing as much in this instance as the eight-thousandth part of the grain of arseniate of potash. But we will not presume to persist in this rational opinion, and we leave to the homœopathists the laurel and the crown. Dr. Pennock observes that the lepra vulgaris in this case commenced in the form of psoriasis guttata, and that such has been the mode in which all the cases of lepra vulgaris he has witnessed did commence. Ordinarily, the psoriasis diffusa is seen intermediate between the psoriasis guttata and lepra, but here the transition from the psoriasis guttata to lepra was direct.

CASE 2. *Psoriasis Guttata and Diffusa, with Lepra Vulgaris—treated by Frictions with Ioduret of Ammonia.*

A weaver, æt. 27, admitted in April 1832. The disease had commenced in November 1827, in the form of isolated pustules. It had been at various times and under the influence of various remedies temporarily benefited. On his admission his condition was as follows.

"The arms and legs of the patient present,

First. Spots, some of which are as large as the hand; others the size of a ten cent piece, red, raised, and covered with scales, which are dry on their internal and external surfaces, and of a pearly whiteness.

Secondly. Circles from one to two inches in diameter, of which the borders are elevated and covered with scales, whilst the central portions are healthy, and on a level with the sound skin. These are situated principally on the abdomen.

Thirdly. Other spots of the size of a small pea, which are slightly raised above the skin, are of a bright red colour, which disappears upon pressure, and are covered with minute scales having the characters of those first mentioned; these elevations are the seat of violent itching. In the course of two months these spots become much enlarged, and form patches an inch in diameter, the skin in the centre of which is without scales, smooth, and healthy; the outer border remaining elevated, and covered with small, dry scales."

For two months, pills of the sulphuret of antimony were exhibited; but were discontinued in consequence of the violent gastric pains they occasioned. The tincture of cantharides was next administered without producing any sensible change. On the 1st of August, he quitted the hospital, and on the 6th of September he returned. The "Fowler's solution" was now given for a month without service. On the 2nd of October, M. Gibert directed the employment of frictions with the ointment of the ioduret of ammonia, \mathfrak{zss} . morning and evening.* These frictions were continued for twenty-nine days, when the patient took eight alkaline baths. The result of this treatment was, we are told highly satisfactory, all the spots disappearing, and their places being indicated by a slight red colour. By the 5th of December, however, the disease had reappeared on all sides, in spite of the resumption of the frictions. He now gave up all treatment until the ensuing Winter.

Dr. Pennock remarks that, in this case, lepra and two forms of psoriasis were seen on the body of the same individual, confirming, he thinks, the opinion that they are essentially the same disease. That they are essentially

of the same class we admit, depending, probably, on similar causes, and originating in a similar state of constitution. Thus the syphilitic tubercle, lepra, and psoriasis are evidently connected with each other, depend on the same state of constitution, and require the same kind of treatment. But they are not therefore the same disease, because they present characters differing in some respects, and run a course which also exhibits some distinctive features. Such is the case with common lepra and psoriasis, and we conceive that, though in many particulars analogous, they are far from being actually identical.

CASE 3. *Psoriasis Inveterata*—treatment by the Sulphuret of Antimony, subsequently by the Ointment of the Ioduret of Ammonia.

A shoemaker, æt. 40, was first affected with psoriasis, which commenced behind the ears, in the Spring of 1809. From that time till October 1832, the disease had made progress, but not uniformly; for it had been temporarily benefited upon more than one occasion.

On the 22nd October 1832, he was received into the Hôpital St. Louis. The treatment at first consisted in the infusion of succory; subsequently that of hops, conjoined with pills of the sulphuret of antimony. Of the latter, commencing with one pill a day, and gradually increasing the dose, he took sixty-three pills in thirty-four days. In the middle of December, we find the following specified as the condition of the patient. The entire scalp is covered by small yellowish scales, which extend over the forehead and temples. On the nape of the neck, and on the back, are twenty patches of various sizes, elevated, red, of a circular form, and covered with light, dry, thin scales. On the breast are two large patches; one of which was cauterized a month ago by the pernitrate of mercury, but the scales have again formed upon the cicatrized surface. Five patches are seen on the abdomen: on the forearms several eruptions originally distinct from each other have united, and envelop the limb in its entire extent.

* "The formula for the preparation of this ointment varies in proportions of the ioduret, from \mathfrak{vj} to \mathfrak{zj} . to an ounce of adeps. The weaker preparation being used when the disease is recent, and the stronger when it is chronic. As the ioduret decomposes by exposure to the air, the ointment should be kept in stopped bottles."

The skin covering these surfaces is raised, red, traversed by numerous transverse furrows, which are again crossed by superficial depressions running longitudinally. From these intersections result small squares, covered by dry, white, thick scales, which are very different in appearance from those of psoriasis diffusa. There were patches on the lower extremities, but their elevation was less than on the upper.

On the 25th of February, no marked amelioration had occurred. The antimonial pills were now suspended, and frictions of the ointment of emetic tartar substituted. The effect of this was to produce much inflammation and pustules, and give the psoriasis a resemblance to impetigo. In April, the tartar-emetic ointment was abandoned, and the tincture of cantharides given internally. It occasioned nausea and diarrhoea, and was abandoned also. On the 26th of October, the patient was directed to make use of frictions with the ointment of the ioduret of ammonia, \mathfrak{zss} . every day. On the 28th of December, the last time when Dr. Pen-nock was able to inspect and to report upon the case, it appeared much improved. The patches, says the report, are very slightly elevated; they are of a pale red colour, which disappears under the pressure of the finger, and the cracks and furrows formerly observed, have almost entirely disappeared; a slight formation of thin, small and dry scales is still seen. Interspersed amongst these spots are portions of skin which is not rough, hard or dry, but which has become soft and pliant; in a word, perfectly healthy.

The patches of psoriasis of the body have undergone the same alterations as those of the arms; they are less numerous, very slightly elevated, and the desquamation is altogether furfuraceous. None of these spots present the rough cracked appearance which was formerly seen upon their surfaces.

In the next case, (the 4th) related by our author, lepra vulgaris was apparently removed by the supervention of variola. On the subsidence of the latter, the lepra also faded, and ultimately disappeared. In the fifth case,

a complication of variola and psoriasis diffusa proved fatal, and afforded an opportunity for examination after death.

Case. The patient, a shoemaker, æt. 26, entered the hospital on the 19th December, 1831, affected with psoriasis diffusa, which had commenced in the September previous. On the 30th he was seized with chills followed by pyrexia, and on the 2nd of January, small-pox made its appearance. The eruption became confluent. On the 6th there was intense angina, with inclination to coma. *V. S. ad \mathfrak{zviij} .* On the 7th, the coma was diminished, but the left eye was much inflamed. On the 8th, delirium with nausea and vomiting—pulse frequent and weak—deglutition almost impossible. The prostration increased, though the other symptoms displayed some variation. On the 10th, he died.

Dissection 24 hours after death. "*Cranium.*—The cerebral veins were engorged with blood; the sinus of the dura mater, as well as those of the brain, were empty. The medullary substance of this organ firm, and clotted with red points of blood.

Face.—Conjunctiva of left eye very red and inflamed; olfactory membrane covered with pustules,

Respiratory organs.—Mucous membrane of the epiglottis of a deep red colour, very small pustules are seen in the glottis. The mucous membrane of the larynx and trachea is much injected and thickened; that of the bronchi of a scarlet redness to their most minute ramifications. *Lungs.*—Crepitant in some portions, but generally engorged with black blood, as in death from asphyxia. *Heart.*—Natural.

Digestive apparatus.—Tongue covered on the edges with eight or ten pustules; amygdalæ swollen. Pharynx red; the superior portion covered with large variolous pustules; no preternatural redness of the œsophagus; its glands are of the size of a millet-seed; on some parts its epidermis is detached. *Stomach.*—Mucous membrane of a brownish-red colour; its consistence normal. *Duodenum.*—Mucous membrane of a pale red, not softened. The

follicles of Brunner were numerous in the upper portion of the intestine. *Peyer's glands* were not developed. Towards the last fourth of the small intestines, Brunner's glands were much enlarged. The *ileum* was of a deep red near its junction with the cœcum. In this last intestine the follicles were of their natural size. The mucous membrane of the colon was red for the space of a foot; the follicles of the rectum were visible, but not as much enlarged as those of the small intestines.

Skin.—The pustules of variola, as well as the patches of psoriasis, are not so elevated as during life. Upon examination of the pustules of the small-pox, the cutis vera was found perfectly healthy; the superposed layers described by CUTUGNO were very evident, and coloured by blood from the capillary blood-vessels of the skin. In the patches of psoriasis, the derma was also found in a normal condition, but the rete-mucosum was exceedingly red, and the sanguineous infiltration much more copious than in the variola, giving a red tinge to two false membranes, which were separated by bloody pus."

Dr. Pennock observes, in reference to the preceding interesting dissection, that it exemplified the fact of inflammation of the rete-mucosum as an attendant upon, and probable cause of psoriasis. M. Rayer states, that this is always the pathological state of that portion of the skin in this disease. Plumbe ascribes it "to a chronic inflammation of the vessels secreting the cuticle, producing morbid growth of this structure, and generally dependent on debility of the system."

The chief peculiarity of the sixth case related by Dr. Pennock, is the circumstance that, in its progress, it displayed the sinous patches of psoriasis gyrata. M. Bielt had seen four instances only of this rare variety. Pills of the sulphuret of antimony, the arseniate of ammonia, the tincture of cantharides, the ointment of the ioduret of ammonia, &c. proved perfectly inefficacious.

CASE 7. *Psoriasis Inveterata*—benefit from the use of *Pearson's Solution*.

A cooper, æt. 57, first became affected with psoriasis in 1823 or 1824. It appeared upon the scrotum in the commencement. On the 10th of October, he entered the Hôpital St. Louis.

"The external two-thirds of the right arm are covered with continued patches of which the base is a pale red, slightly raised above the skin, the surfaces of which are covered by large, thin, dry scales, of a pearly whiteness, and are separated by longitudinal ridges. Other elevations are observed, from which the scales have been torn by the nails of the patient, leaving the red surface exposed. Instead of the borders ending abruptly by round edges, as psoriasis usually does, this case presents a different appearance. The diseased surfaces gradually lose their elevation; the red colour of their base changes by insensible degrees to a light brown, and this again into the natural colour of the healthy skin.

The second remarkable circumstance is, that there is no trace of other spots or patches of psoriasis, either near the large one on the arm, or near those of the body.

An eruption like that on the arm surrounds the neck. The scrotum is hanging, has a red, dry appearance, and is covered with scales of a yellowish colour; so that without the psoriasis of the body, it would be taken for an eczema; frictions having modified the appearance of the scales.

The entire scalp is affected, and the scales which are there of a more brilliant white than on the body; they are very small, and resembling the furfuraceous appearance of pityriasis; on the anterior part of the cranium the red base and elevations of psoriasis are scarcely visible; on the back part of the neck, on the contrary, the rounded edges and raised border are covered with tolerably large scales. It would seem that the neck is covered by psoriasis, whilst on the anterior part of the head an eruption intermediate between pityriasis, rupea, and psoriasis is presented.

Treatment.—In thirty days the patient took twenty-four and a half drachms of *Pearson's solution*, during which time,

his usual drink was *an infusion of the sapientaria officinalis*, under which treatment the affection was mitigated."

This "mitigation" augmented to convalescence, yet the patient was certainly not cured when the report concluded.

CASE 8. *Cutaneous Affection intermediate between Psoriasis and Eczema.*

We notice this case because it displays a condition intermediate between psoriasis and eczema, a condition which we do not think extremely rare as we have lately witnessed two examples of it. But we will mention the particulars of the case of Dr. Pennock.

A labourer, æt. 57, who had lived chiefly on bread and cheese and brandy, thought that he observed the complaint in August, 1832. It commenced on the right elbow, from which it extended to the remainder of the body. In March, 1833, he was received into the hospital. His state was then as follows, and we pray the attention of our readers to the particulars.

"On the back are observed patches of diseased skin, varying from two lines to an inch in diameter, and of an elliptical form. These portions are covered with scales, which being detached, the skin is seen of a pale red colour, in most instances not raised above the sound skin, and in others very slightly elevated. The scales on their external face are white, micaceous and reticulated; internally they are slightly yellow. They are evidently formed of the epidermis, and appear to be composed of two laminae.

Towards the back of the neck, and on the shoulders the patches unite, and form a continuous series; the skin composing them is red, slightly raised above the level, humid from serous effusion, and covered with dry, thin, yellow scales. The same appearances are presented on the abdomen as on the back.

On the arms, particularly on the internal parts, are seen spots, (plaques,) which are raised the fourth of a line above the sound skin, of a red colour, and from two lines to an inch in diameter, and covering the elbow joint;

these spots are divided longitudinally by furrows, and the desquamation consists of crusts which are yellow, of various forms and dimensions.

On the scrotum, and on all the inner surfaces of the thighs, the skin is red: these parts are covered with thin yellow scales, some large, others small, varying from a line to half an inch in diameter. The internal face of these scales is generally humid, and on the whole of the inner part of the right leg is an abundance of serous exudation. On the legs the scales do not present the white micaceous aspect that is seen on those of other parts of the body.

On the scalp, the eruption has the appearance of psoriasis."

As Dr. Pennock was unable to follow up the case, we need not enter on the treatment. In fact, the main interest is connected with the complication of the characters of psoriasis and eczema. We mentioned that we have lately witnessed two instances of this description. The last was in the person of a gentleman who applied to us a few days ago. He had had the eruption for three years, and it had commenced in India. We need not mention the particulars of the eruption as the case of Dr. Pennock will furnish the essential features of both. It was, however, extensive and distressing.

One circumstance was common to all the cases we have seen, a tendency to occasional exacerbations and remissions. The exacerbations were always ushered in with fever, but this after a short time subsided. The general pyrexia was always attended with aggravation of the local inflammation, and the latter generally shewed a disposition to subside in proportion as the former declined or disappeared. This circumstance, however, is observed in many cutaneous affections, and particularly, perhaps in psoriasis and eczema. We think that it deserves the especial attention of the surgeon or physician in directing the management of those affections. The remedies that are applicable to the inflammatory stage are certainly not required when the inflammation has subsided. In the inflammatory stage, mercurials and active

purgatives, in some instances even venesection, salines, and antiphlogistic regimen, are the natural and indeed the most advantageous remedies. But after the inflammatory stage has passed away, sarsaparilla and the liquor potassæ, the liquor arsenicalis, and medicines of that class are indicated. Much, we think, depends on watching the state of the eruption, and on not indiscriminately using tonics or specific remedies, no matter whether there be fever or not—no matter whether local inflammation is or is not in existence.

The resemblances and distinctions of psoriasis and eczema are briefly, but sufficiently pointed out by Dr. Pennock. The points of resemblance, he observes, are as follows:—

“First. The epidermic secretions.

Secondly. The slow progress and chronic character which each may present.

Thirdly. The red coloration of the skin.

Fourthly. The intense itching.

The differences may be thus shown.

First. The elevation of the derma. (*Psoriasis.*)

Secondly. Vesicles at the commencement. (*Eczema.*)

Thirdly. Serous effusion, accompanied by the epidermic secretion. (*Eczema.*)

Lastly. The skin smooth and shining after the cure. (*Eczema.*)

We must now indulge in a long quotation, containing, as it does, a summary of the facts in the preceding cases, and of our author's observations in the St. Louis' Hospital.

“Upon an analysis” he says, “of the preceding cases, as well as some others in the writer's possession, it is observed, that the disease first appeared on the superior and inferior extremities, especially in the vicinity of the articulations, in seven out of ten instances; on the head twice, and once on the scrotum. In every case the disease commenced with the sensation of burning and itching, and the primitive appearance was that of enlarged papillæ, which were soon covered by the formation and exfoliation of minute and dry scales. The papular appearance increased, assumed a form more

or less circular, the surface of which did not manifest a central portion of sound skin previous to having been covered by squammæ. The primitive appearance of lepra and the varieties of psoriasis were the same, and in two instances, patches of the former were intermixed with those of the latter; these facts, coinciding with the observations of pathologists of other countries, warrant the opinion, that the difference of the disease is merely in the form, and that essentially they are but varieties of the same affection.

In one-fifth of the cases, one of the parents of the patients had had a squamous affection. No facts were presented which induced the idea, that the disease had been the result of contagion. The observations having been confined to persons in the poorer classes of society, no comparison could be instituted between them, and those surrounded by more comforts. Most of the patients were persons whose general health, previous to the disease, had been good.

One of the individuals attributed the origin of the disease to domestic chagrin. It is certainly remarkable, that a moral cause should produce such an effect upon the skin, but similar cases have been frequently remarked. Plümbe relates two highly interesting cases of that character. He remarks, that ‘the class of persons who appear to be most subject to it, (lepra,) are those whose minds are anxiously occupied by the cares of business or study, or who are accustomed to bodily exertion beyond what their strength enables them to bear.’

Respecting the pathology of these affections, writers are far from being unanimous in their opinions. Alibert observes with great truth, ‘Ce qui deconcerte l'observateur lorsqu'il est à la recherche des causes qui influent sur le développement de l'herpès, c'est de voir, ce genre d'affection se manifester chez des sujets qui jouissent, au moins en apparence, d'une santé parfaite.’ Plümbe thinks that the vessels which secrete the cuticle, are the seat of chronic inflammation, which renders the production of the epidermis more abundant, and causes the exfoliation

of the scales. This hypothesis is imperfect, as it does not account for the circular form which the patches of lepra present. M. Rayer attributes the diseased action of the cuticle to the inflammation of the rete-mucosum. In case fifth of the preceding series, this condition of the mucous tissue was observed; how far it had been influenced by the existence of variola, the writer is unable to determine."

Dr. Pennock does not attempt the diagnosis between psoriasis and lepra, because, as has been already mentioned, he considers them as varieties of the same affection. The presence of dry scales, he remarks, is the general distinctive character of psoriasis. But sometimes, the primitive exfoliation is superseded, or attended by serous or sero-purulent appearances; in this case the presence of vesicles or pustules may be detected on examination, and the scales are not dry, gray, and friable, but are large, soft, and humid concretions of the effused fluids.

"Chronic eczema in some instances presents appearances very similar to psoriasis; this is particularly the case when it affects the head. In this case, although the scales may be dry, yet upon examination immediately behind the ears the surface will be found moist, and vesicles are occasionally seen in the vicinity. Psoriasis of the scalp may be distinguished from pityriasis by the thickness of its scales, and by the solid papular indurations, which are more or less prominent."

On the distinctions between common psoriasis and lepra, and certain syphilitic eruptions we will not enter here. A paragraph would be perfectly inadequate to point them out, and we have not space for more extended remarks. We insert our author's remarks upon the treatment, which probably comprise the greater part of what is known with respect to the management of these most obstinate eruptions.

"Pathologists differing respecting the seat of the disease, present views equally adverse in regard to the treatment. Rayer founding his opinion on the idea, that an inflammation of the rete-mucosum is the pathological state

of the skin, recommends venesection, and the application of leeches to the diseased parts, upon their first appearance. Plumbe, on the contrary, regarding this affection as the result of debility, directs his entire attention "to the restoration of the strength of the patient to its original standard, not simply before the cutaneous disease appeared, but even before those habits or pursuits were adopted, which for years may have preceded it." Hence he urges the importance of placing the patient under circumstances favourable to the invigoration of the general health. It would seem impossible to lay down any positive and unvarying plan of treatment, occurring as the disease does, in the poor, enfeebled by every variety of privation, and in the rich, surrounded by every comfort and luxury; in fact, the practitioner must be directed by his own discrimination.

The practice of M. Bielt is, if the patient be young and vigorous, the skin inflamed and red, the pulse full and active, to have recourse to venesection, simple baths, diluent drinks, rigid diet, and rest. He disapproves of the application of leeches as never producing any beneficial effects. In those cases where the patient is old, enfeebled by disease or insufficient nourishment, and where there is not evidence of much inflammatory action, tonics should be administered. At St. Louis, where the class of patients are those who have been subjected to much privation and distress, the practice last mentioned is resorted to, until the state of the system is such as to support active treatment. The external applications in use at that hospital, and which have been attended with useful results, are the various preparations of iodine, combined either with sulphur, (grs. xv. to grs. xx. of the proto-ioduret to ʒj. of axunge;) or the proto-ioduret of ammonia combined as mentioned in the first part of this essay. Whilst the patient is on the use of a bitter infusion, (generally that of hops,) frictions with these ointments are made morning and night on the patches of the eruption. The result with the ointment of the ioduret of ammonia has been pre-

viously stated; that with the ioduret of sulphur is such as to warrant the continuance of its use. In a case of psoriasis diffusa, which I have recently had under my charge, the result of the treatment with friction with the ointment of the ioduret of mercury has been very satisfactory. M. Alibert used with much success the ointment of the white precipitate of mercury. Plumbé recommends in strong terms the following external application: *R. Hydrarg. subm.; Plumb. superacet. āā. ʒss.; Ung. hydrarg.; nitrat.; ung. cetacei, āā. ʒij. M.*

Baths are of much use in exciting the circulation, in producing a more natural state of the skin, inducing perspiration, and by detaching the scales. They must be directed on the principles previously mentioned; using the simple, emollient, or narcotic baths when much inflammatory action exists, and the more tonic in cases of enfeebled states of the system; sulphureous, sea water, alkaline baths, and those of the preparations of iodine, are then considered as most useful.

Vapour baths, either general or local, are also useful auxiliaries in the treatment of these affections.

As regards the internal treatment, Biett places much reliance on purgatives of calomel, (either alone or combined with jalap,) when administered in the forming stage of the disease. It is found to be particularly valuable in cases of children. He counsels its administration in small, in preference to large doses, with the view of producing a slow, rather than a sudden change in the system.

The tincture of cantharides has often produced much beneficial effect in chronic cases, or where the disease has reappeared, or where it exists in persons of enfeebled constitution. His mode of administering this preparation is from three to five drops in a tea-spoonful of sweetened water or ptisan, in the morning previous to eating. The state of the digestive and urinary organs are to be closely attended to, and if no epigastric pain, nausea, purging, or ardor urinæ should be induced, it may be augmented five or six drops a day, until twenty-five to thirty drops a day

have been administered. In exceedingly inveterate cases of this disease, all the preceding treatment has been found to fail; in such cases the exhibition of Fowler's and Pearson's solution has succeeded. The commencing dose of Fowler's solution being three drops in some inert vehicle, and gradually augmenting until twenty-five to thirty drops per day have been administered. Pearson's solution being much weaker, may be given in the dose of a scruple, increasing to half a drachm. The preparation of the arseniate of soda is applicable to women and debilitated persons. In the administration of these remedies the medical observer should keep constantly in view the injury which the gastro-intestinal mucous surfaces may sustain, and cease the exhibition of these preparations upon the slightest manifestation of diseased action.

M. Biett reports several cases of psoriasis inveterata, where he obtained satisfactory results by the administration of the arseniate of ammonia used in the same doses and under the same circumstances with the arseniate of soda.

In psoriasis affecting the prepuce, the application of mercurial ointment should be used. In psoriasis scrotalis, fumigation with sulphur, or cinnabar, is found very efficacious."

The plan we have found most beneficial has been the employment of antiphlogistic remedies during the febrile stage of psoriasis, or when any local inflammation exists—but when these are not present, or have passed away, the treatment must be changed for a plan of a more stimulating character. Sarsaparilla and the liquor potassæ or the liquor arsenicalis, is certainly the remedy that answers more frequently than any other, but light bitter infusions with soda, or if the patient's system be enfeebled with the volatile alkali, and gentle tonics of various kinds, are not unfrequently serviceable in these circumstances. Purgatives, especially combined with mercurials, are extremely beneficial in psoriasis. In leprosy they are not so useful. In psoriasis there is generally

more of inflammatory action, and a febrile state, than in common lepra. Much, however, must depend on the circumstances of the individual case, and much on the experience, the judgment, and the tact of the physician.

We think the preceding paper not unworthy of the attention of practical men.

MR. BLACKLEY ON ERYTHEMA NODOSUM.

Our excellent contemporary, the Dublin Journal for July of the present year, contains a short paper on erythema nodosum, from the pen of Mr. Blackley. He offers the results of his observations on the characters, and of his experience in the management of this complaint. He also presents a case circumstantially and explicitly detailed, in illustration of his treatment and opinions.

"This is a disease," he says, "of by no means frequent occurrence, inasmuch, that many practitioners indeed do not recognize it when first presented to their view; it is not peculiar either to *age* or *sex*,* nor have I known it to arise in any instance from infection, on the contrary, I have witnessed many cases where other children mixed with impunity with one so affected, without exhibiting the slightest symptoms of the complaint. So far as my experience goes it never proves fatal, though it reduces the patient very considerably in strength and habit, and in adults sometimes assumes an alarming appearance on that account: it is uninfluenced by season, occurring in the depth of winter as frequently as the middle of summer, nor am I prepared to refer it to any peculiarity of habit or

idiosyncrasy.* I coincide in opinion generally with Mr. Plumbe, in attributing this disease to some '*derangement of the secretions, and disordered state of those organs in which the process of chyli-fication is carried on*, though I think the cause of it may be more *particularized*. The state of the tongue, however, and the pulse, the nature of the excretions, the proneness of children so affected to pull their lips, &c. &c., together with the good results which we observe to flow from the properly directed means adopted to remove intestinal irritation, all tend to prove, that this opinion is founded on just and rational foundations."

There are some particulars in which our experience, such as it is, militates slightly against that of Mr. Blackley. In the first place, we have found the complaint less unfrequent than it seems to have been within the circle of his observation—in the second, we have generally, indeed we have almost always seen it in young persons—in the third place, females have formed the preponderating majority of the patients, and those of a gross, sanguineous habit, with ruddy complexions conjoined with a bad circulation, have usually appeared most prone to the affection—and finally, we have certainly observed more cases in the Spring and Autumn than at other seasons of the year. But to proceed with the descriptive remarks of Mr. Blackley.

"This complaint always appears in the first instance on the *legs*. I have never known an instance to the contrary; the parts first affected are the shins, where we observe large oval patches, 'the long diameter of which,' as described by Mr. Plumbe, 'is parallel with the tibia;' this has been preceded by three or four days of fever of a mild type, at the end of which time the patient perhaps complains of sore

* "Dr. Bateman appears to be of an opposite opinion, as he says, 'it seems to occur only in women.'—*Vide* his Synopsis of Cutaneous Diseases. Mr. Plumbe, however, very justly asserts the contrary.—See his Practical Treatise on Diseases of the Skin. Also Merriman in the edition of Underwood on Diseases of Children, edited by him."

* "I have seen it affect a gentleman, and after an interval of ten or twelve years exhibit itself in two of his children in the course of twelve months—a girl aged seven, and boy aged four years; it did not appear in the other children of his family."

legs, and on examining these we find the disease developed. A remarkable feature in this complaint is, that it is confined for the most part to the *fronts* of the legs: some spots may appear on the sides, especially over the fibula, but seldom or never on the calves, though the tendo Achillis is not always exempt: it will also exhibit itself on the arms, where the same peculiarity is to be observed, with this exception, that here the *fronts* of the arms are the *exempted* parts. In both cases, however, we may remark, that the eruption takes place over the muscles of *extension*, while those of *flexion* are not affected. The eruption exhibits all the phenomena of inflammation, redness, heat, pain, and swelling; yet in each of these a certain peculiarity is found to exist; thus, in a large blotch, the redness is first of a bright colour, not so vivid as in erysipelas, nor shining. In the course of twenty-four hours it becomes darker, and the centre now begins to approach a purple hue, which it attains in from sixteen to twenty-four hours more: in the same additional period of time it assumes a light slate, and finally an ochre colour, after which at an indefinite time, the skin regains its natural appearance. The circumference of the blotch does not keep pace in its changes with the centre, but *follows* it; thus, when the latter is purple, the former is red, appearing like a ring of inflammation surrounding the centre, and when the centre is of a yellowish hue, the circumference becomes purple, which colour is there retained after the disease has terminated; whence the appearance is presented for several days of purple rings, where large blotches previously existed. I would here observe, that it is in the *large blotches* only that these *characteristic* changes are to be traced; in the small ones they are not generally to be remarked.

The sense of *heat* is not so great as we might expect from the inflammation, neither is the *pain* when in a recumbent posture, but both are increased on the patient assuming the erect position, when a heavy, bursting, and tingling sensation is conveyed to the inflamed parts of the leg, owing of course to the

gravitation of the blood; even in the *horizontal* posture *pressure* on the inflamed spots causes pain, and should be avoided. The *swelling* in each tumour appears simultaneously throughout, but *subsides* from the centre, which does not at any time feel so hard as the circumference; thus in the stage of the disease where the *centre* is slate-coloured, it is also sometimes so *soft*, as, when compared with the *circumference*, which is harder and of a red colour, to give rise to apprehension (in those unacquainted with the disease) of *sloughing* from the centre. I have never seen an instance in this disease of the skin giving way; the termination of it is *invariably* by resolution. Its duration depends entirely on the means adopted to remove its exciting cause, which it is, therefore, necessary we should perfectly understand. Agreeing as I do generally with Mr. Plumbe, in his remark before quoted, I yet think, that this disease is more *particularly* referrible to the vitiated secretions of the *liver*: the dark and fetid character of the *fæces*, the deep colour of the urine, depositing a heavy sediment, the loaded tongue, and headache, with frequently a sensation of heaviness in the region of the liver, would point out that viscus as being the part most probably that is primarily affected; while the happy results which flow from the use of calomel in improving the tone of this organ, proves that such a conclusion is by no means unwarranted."

We cordially coincide with Mr. Blackley in directing marked attention to the state of the secretions. We have always found them extremely depraved, and usually imperfect. The tongue has been loaded, the countenance perhaps bloated, the bowels confined, the urinary secretion commonly disordered. We fear that too many cutaneous disorders are treated empirically even by men who are otherwise scientific and judicious in their views and practice. We daily see a farrago of washes and of ointments prescribed for eczema, psoriasis, and impetigo, when smart purging, restricted regimen, and unirritating applications are likely to be attended with much more benefit.

Mr. Blackley's *methodus medendi* may be briefly stated:—slops for diet, till the tongue is clean, and till two or three days have passed without the appearance of any fresh spot—calomel and Dover's powder for one night, followed on succeeding nights by calomel and jalap—tonics, after the subsidence of the disease. After the termination of the complaint, the skin which has been affected remains for several days of a blue mottled appearance, resembling bruises, and frequently gives off little branny scales; the swelling also remains for a considerable time, it is most remarkable over the *tibiæ* and *fibulæ*, and remains longer in those situations than over soft parts, giving to the bones an uneven appearance, and to the touch resembling a great number of nodes of various sizes over their surface, whence of course the origin of the term, *erythema nodosum*."

We perfectly agree with Mr. Blackley in his recommendation of purgative medicines. They are absolutely indispensable. But we have sometimes found it advantageous to combine with them, in young persons with a feeble circulation, light bitters with the carbonate of ammonia. After a sharp dose or two of calomel and jalap, and perhaps senna combined with colchicum, we have prescribed the infusion of cascarrilla with the spir. ammon. aromat. once or twice during the day, ordering the patient a pill of the pil. hyd. and pulv. ipec. at night, succeeded on the next morning by a draught containing the carbonate and sulphate of magnesia and the vinum colchici. Sometimes light bitters with the carbonate of soda, or the caustic alkali may be advantageously conjoined with the purgatives. We repeat, however, that the latter are the remedies on which we must principally lean.

There is nothing in the case detailed by Mr. Blackley to detain us. But he draws attention to another kind of case, less familiar to our readers, probably, than the preceding. His description of this we must give in his own words.

"A disease exists of which I have seen but few examples, which though

totally differing from the preceding, might yet be confounded with it, resembling it in some of its general symptoms, but differing from it in its situation and cause, and the means indicated for its cure.

It commences by a little tumour under the skin of the back of the leg, generally the calf, feeling like a large grain of shot in that situation; without colour and without pain, unless when hardly pressed. Within about a fortnight it has increased to the size of a swan-drop, and has much the feel of an encysted tumour; the skin now begins to assume a dusky red colour, and is painful on pressure; within three weeks from this time, if nothing has been done to relieve the complaint, the patient cannot stand on the leg without pain; the tumour is now much enlarged, and conveys a distinct feeling of fluctuation; if an incision be now made into it, the surgeon will be surprised, and perhaps not a little mortified to find, that much blood, but no matter flows, and the wound may put on a healthy appearance, and heal slowly as a simple ulcer, but leaving behind a considerable cicatrix. This, however, is not the treatment I would recommend, having seen it produce an ulcer of very long standing.

The plan I pursue is to apply leeches to the tumour in the evening; when they fall off, a poultice is applied, into which the blood flows during the night. In the morning, the leg being washed, a compress of lint, dipped in cold water or a solution of alum is laid on the tumour, over this a piece of oiled silk, and the entire leg from the foot to the knee carefully bandaged. In a couple of days, if the part becomes painful, the same treatment is to be adopted, and persevered in from time to time until the tumour subsides. At the same time I recommend cold bathing, if in summer, and a general tonic plan to be pursued, due attention being paid to the state of the bowels: during this time riding or carriage-exercise may be ordered, and even gentle walking when the tumour is not painful on standing. In this manner I have successfully treated this dis-

ease, (at a time that high surgical authority had deemed the *incision* of the tumours to be necessary) and with a comfort and liberty to the patient that could not be enjoyed, had the latter method been pursued. The tumours gradually lessen under this plan, and sometimes, not sooner than six weeks, is resolution effected, though even then a certain thickness remains in the skin. At this period a little camphorated mercurial ointment, rubbed into the part, will prove useful. The application of leeches frequently is troublesome, yet they are a slight inconvenience, compared to the pain of operation and long subsequent confinement. This disease arises in persons of a cachectic habit; as I have only seen it in those of the better ranks, and in females, I have at times been inclined to attribute its remote cause to wearing tight garters; I have not seen it described, but as I have no doubt that its immediate cause is the rupture of a small blood-vessel in the cellular substance under the skin, or a varicose vein producing subsequent inflammation, I would venture to apply to it the designation of *erythema hæmorrhagica*.

The following distinguishing traits, then, exist between the two diseases:

The *erythema nodosum* is ushered in by *febrile symptoms*: the appearance of the eruption is *sudden*. The *fronts* of the legs are the parts affected: the arms likewise may and do exhibit the disease, each blotch runs through its *inflammatory course*, if I may so call it, in two or three days, and depletion (I do not include bleeding) is indicated for its cure.

The *erythema hæmorrhagica* (as I have ventured to designate the other disease) is *not* preceded by febrile symptoms, it comes on *gradually*; it affects the *legs only* so far as I have seen, and the *calves* of these; none of the *characteristic* appearances of colour, as in the former disease, are exhibited; it may be weeks going through its course; the *tonic* plan is indicated for its removal; and it appears to be much more a *local* than a *constitutional* affection.

To conclude: the *former* disease seems to me to depend on an effusion

of lymph;* the *latter* to a vein in a ruptured or varicose state causing topical inflammation."

There is yet another cutaneous affection, liable to be confounded with the *erythema nodosum*, yet differing from it in numerous respects. Mr. Blackley makes no mention of it, although it is extremely common. The disease is first noticed as a round, hard lump, like a marble, under the skin. The latter is at first quite undiscoloured, but, as the subcutaneous lump augments in size, it becomes adherent to the skin, and an erythematous blush is suffused upon the latter. If the tumor be incised in this stage, it is found to present a yellowish structure, like that of cheese, enveloped in a sort of cyst, formed by the cellular membrane. The tumor softens; the skin becomes redder, grows thin, and ulcerates; the structure of the tumor, half matter, and half a cheesy-looking unorganized deposit, is disclosed; this gradually sloughs out, and finally a cachectic ulcer is left. These subcutaneous tubercles are most common on the legs, though they do appear elsewhere. All do not advance to suppuration, some being spontaneously, or under appropriate treatment, resolved. They occur in persons much out of health, not unfrequently as a cachectic venereal secondary symptom. Some persons have named this the "subcutaneous tubercle." The best mode of treatment is the application of galbanum plasters and bandaging, as a local means; and mild purgatives, with tonics, especially sarsaparilla, and good diet, in the way of general treatment. When suppuration is evidently taking place, poultices, of course, are necessary, and usually it is better to allow ulceration to occur sponte suá in preference to employing the lancet or the knife. We have given this brief sketch of the "subcutaneous tubercle," in order to render the article more complete.

* "Some authors believe that *blood* is effused in *erythema nodosum*, and have therefore classed the disease with *purpura hæmorrhagica*. I do not think they are correct."

The affection is a curious, a common, and an important one, and justice cannot be done to it in a paragraph.

THE CAUSE OF SLEEP.

Many of our readers are aware that a sharp controversy has existed, for some time past between Messrs. Macnish and Carmichael, respecting the cause of sleep. The following extract embodies the chief points of Mr. Carmichael's doctrine.

"The absorbents and discerning vessels never remit their offices—those carrying off the old particles from every part of the frame, and these depositing new ones in their place; the absorbents being most busy with the muscular fibres, which are most exercised by labour, or the nervous fibres most exercised by the operations of sensation, volition, and thought. Yet these fibres, so exercised, are always the strongest and most powerful of their kind in the frame: the discerning vessels must therefore, be equally busy in restoring new particles in the place of the old, or during certain intervals, rather more busy, because more are restored than are taken away, as is proved by the increase of size, proportioned to the occasional or habitual exercise of the parts. Yet it is evident that it is not during the moments of exercise that the great mass of new matter is deposited, otherwise the muscular and nervous fibres in question would go on thickening and strengthening, the longer the exercise of labour and thought was continued; and this, we know, is contrary to fact;—fatigue ensues, and rest is necessary, and during that rest it is probable that the discerning vessels, though always depositing new particles, deposit much more, or the absorbents remove much less, than at other times. By rest, I mean a mere cessation from labour; and such rest is not sleep. The large mass of new particles deposited on the muscles cannot affect their tough and insensible fibres by any striking phenomenon; but when such a mass is deposited on the delicate, ten-

der, and sensible structure of the brain and nerves, how different must be the effect. If small in quantity, and while these organs are in a state of active energy, it may be hurried unobserved into the existing activity of the living matter; but if large in quantity, and while these organs are resting from their labours, can it be that the extraneous and unassimilated mass does not press its increasing weight on their fragile machinery, and produce an EFFECT something like the pressure of the over-swollen bloodvessels, but natural, necessary, and healthful—the PARALYSIS, not of apoplexy, but of SLEEP?

While the incumbent mass thus paralyzes the *encephalon*, the body is powerless; there is no voluntary motion, no perception, no thought, no dream. But when the assimilation is complete in any one of the organs of the mind, then thoughts arise; but there is no perception until the assimilation is also complete in one or more of the organs of the senses; until then the simple current of our thoughts constitutes an ordinary *dream*.

If the nerves of motion continue invested in a newly deposited mass of nervous matter, while the mind anxiously desires and essays in vain to move the limbs—this is *nightmare*. If these nerves are extricated from their trammels, and those desires and efforts of the mind still continue—if they command and the nerves obey—this is *sonambulism*. But these dreams, whether ordinary and natural, or attended with the horrors of nightmare or the perils of sonambulism, vanish as our senses admit the impressions of the external world. We are then *awake*; but while thus awake, if the nerves of motion are still asleep—if their trammels still continue upon them—this is the *daymare*, so feelingly described by Mr. Macnish. If through any idiosyncrasy the process of assimilation were never sufficiently considerable to paralyze, by the mass of new particles, the brain and nerves of sense, the individual would exist as one that *never slept*, even though his nervous system should obtain, in some degree, those blessings which are the peculiar concomitants of sleep, a

sufficiency of nourishment and a renovation of vigour. If, through an opposite idiosyncrasy, the deposit of new particles should be so superabundant and incessant as to continue the paralysis beyond the usual and natural period of slumber, this state would present the rare and hitherto mysterious phenomena of *protracted sleep*, sometimes terminating even in death, as in the case of Elizabeth Perkins, detailed by Mr. Macnish. These two opposite idiosyncrasies seem to arise from opposite diseases of the secreting vessels of the head, one promoting to excess, and the other in an equal degree preventing, the effusion of the due quantity of nervous matter requisite for the healthy and vigorous state of the nervous system.

If it should be asked, How can the same cause operate in different ways? How can the assimilating process at one time cause sleep, and another not cause it? How can it, though unremitting in activity, at one time paralyze the brain and nerves, and at another rather enliven and invigorate them?—These questions are difficult, and the more difficult because, in the material world, we can find no object wherewith to compare and illustrate the phenomena of mind. The element of fire must suffice on the present occasion, where no better ligament of analogy between things so different can be had:

‘Nutritur ventis, ventis extinguitur ignis;
Levis alit flammas, grandior aura necat.’

If a fire burns clearly, brightly, and fiercely, still it requires a constant supply of fuel to keep up its intensity, and replace the solid particles expended in combustion. A small quantity frequently added, so far from paralyzing, increases the activity of the fire; but when that activity is exhausted, when the very energy of the flames, like the exertion of a powerful mind, has wasted away the substance on which it fed, and these flames sink enfeebled, and the fire is diminished and dull, if you heap over it a heavy mass of fuel, the flames are smothered, the activity ceases, the element sleeps. Hours are required to extend the vivifying influ-

ence to the new matter; at length the increasing warmth pervades the whole mass, the assimilation is complete, and the smallest incitement stirs up again all the energies of the furnace. If too little aliment be supplied to the glowing mass, it will burn out, like an overworked brain in similar circumstances; while too great a weight of fuel cast on the exhausted hearth overwhelms the expiring embers, and the result is the slumber of death, not of sleep.”*

The hypothesis (for we believe it may be considered only as hypothesis) of Mr. Carmichael is ingenious—perhaps it may be true. The laws of alternate sleep and activity, like all the laws imposed on us by the Creator, are, no doubt, the wisest and the best that could be devised. We can trace the operations of many of them—but very few of them can we explain. It strikes us that there are some difficulties in the way of Mr. Carmichael’s explanation of the causes of sleep. If this image of death be occasioned by the deposition of large masses of new matter on the delicate organization of the brain and nerves, inducing the “paralysis of sleep, it is curious how the bite of a flea or a bug will often disperse all these depositions, and start us into wakefulness! It is also curious that all animals become more or less sleepy, during the very first process of *digestion*, in the stomach, and long before assimilation, much less deposition of assimilated matters, can possibly commence. The dog, the hog, and the glutton fall fast asleep as soon as the stomach is crammed to satiety. They are most awake and active after digestion, and when assimilation, secretion, &c. are in full play.

Then, again, extreme cold and hunger induce an almost irresistible propensity to sleep. Does this arise from depositions of matters on the brain and nerves, for the renewal of their parts and powers?

It appears to us that every thing is periodical or alternate in this world,

* The Phrenological Journal June 1, 1835.

and nothing constant in action, even for a short time. The muscles cannot always be in a state of contraction. The brain cannot always be thinking. But the organ of the mind cannot cease to think, except through the mysterious agency of sleep—and, therefore, sleep was ordained. How it is induced we know not. Opium will often lull to repose by diminishing sensibility; but still we are totally ignorant how the sleep is produced in consequence. We must, therefore—

"Wait the great teacher Death, and God adore."

DR. MAC ADAM'S CASE OF LARYNGITIS.

Dr. Mac Adam relates this case in our Dublin contemporary for July, because he thinks it offers evidence of the value of the operation of tracheotomy, and because the post-mortem appearances seem to him to throw light on the immediate cause of death in laryngitis, when it occurs sometime subsequently to the operation.

Case. Christopher Nowlan was admitted into the city of Dublin Hospital, on the 16th of March, 1835, with the ordinary symptoms of laryngitis. By the stethoscope, placed on the larynx, a loud, harsh, crowing sound is heard, extremely grating to the ear; the chest sounds natural on percussion, both anteriorly and posteriorly, and the loud laryngeal sounds, re-echoing through the thorax, prevent any respiratory murmur or other sounds from being distinguishable; there is some sonorous râle, however, audible in the posterior part of the chest, though nearly drowned by the laryngeal sounds. He complains of soreness when pressure is made on the *alæ* of the thyroid cartilage, which also excites a fit of coughing. There is no aphonia, his voice, though extremely hoarse, can be heard at some distance distinctly. Pulse 108, soft and compressible; tongue clean; there is some slight redness of the fauces, without tumefaction; face slightly flushed, bowels confined.

Seven weeks previously, he had been attacked with fever, which lasted for three weeks. On the decline of the fever he became affected with cough and sore-throat. These symptoms had become aggravated into the intensity described on the night of the 15th.

They continued, with little change, from the 16th till the night of the 17th, when they became much aggravated. At half-past twelve o'clock in the morning of the 18th, Dr. Mac Adam was sent for, and found the patient much worse; he appeared in momentary danger of suffocation. The dyspnœa increased, and, at half-past 1, a. m. he seemed sinking. Tracheotomy was now determined on, and performed, the patient seeming actually dying at the time. The upper rings of the trachea were rapidly laid bare—the wound which was deep, was filled with venous blood which continually welled up from its bottom. Dr. Benson, the operator, fearing to use the knife under such circumstances, plunged a large trocar into the trachea, expecting that the canula would so fill its transit as to prevent any blood from getting in; this had the desired effect, as was evident by the firmness with which the instrument was grasped by the elastic trachea.

"On the introduction of the canula into the trachea, a strong inspiration ensued, followed by a violent fit of coughing and dyspnœa, succeeded by the expulsion of a quantity of viscid mucus mixed with blood through the tube; almost immediately after which his respiration became comparatively easy, the colour returned to his cheeks, his pulse became more distinct, and his surface warm, and in a short time he was able to speak distinctly, to sit up in his bed, and to take some drink. He had, however, frequent attacks of violent cough and dyspnœa, succeeded by the expulsion of bloody mucus through the tube, followed by nearly natural respiration, which was evidently performed exclusively through the canula, for a lighted candle brought near its orifice was extinguished during expiration; and when the finger was placed on its extremity, respiration was suspended, and the patient suffered the

distressing sensation consequent upon holding the breath."

During the day and night of the 18th, there was little change. Great care was necessary to keep the tube free from the viscid mucus, with which it was incessantly obstructed. On the morning of the 19th, he was salivated by mercury which he had taken for forty-eight hours. The canula slipped out, and it was necessary to re-insert it. Debility increased, although no great change occurred in the other symptoms. Early in the morning of the 20th, about 531-2 hours after the performance of the operation, he expired.

Dissection. "The muscles being carefully dissected off the larynx anteriorly, the sterno-hyoid and sterno-thyroid were found matted together by coagulable lymph, and could scarcely be distinguished from each other. The tongue, trachea, and lungs were removed together from the body, for the purpose of a more minute examination. The opening made by the trocar into the trachea was distinct and gaping, and was found situated between the first and second rings, penetrating the lower part of the thyroid gland. On raising this gland a considerable mass of semi-cartilaginous substance was found covering both alæ of the cricoid cartilage; on dividing this substance, an abscess was exposed lying on both sides of the cricoid, which was denuded anteriorly; both alæ appeared sound; this cartilaginous mass occupied the situation of the crico-thyroid muscle. On dividing the pharynx posteriorly, the whole anterior surface of the epiglottis was found elevated by serous effusion into the submucous tissue, appearing like a gelatinous mass between it and the root of the tongue; the effusion extended along the aryteno-epiglottidean folds; the arytenoid cartilages were covered with the same substance, and appeared greatly enlarged and altered in form. On looking down into the larynx, the rima appeared completely closed; the ventricles were obliterated by the elevation and thickening of the mucous membrane above and below; the chordæ vocales were thickened and rounded, not presenting a de-

fined edge. The back of the pharynx and trachea being divided between the arytenoid and broadest part of the cricoid, the abscess, which was before seen on the sides of the cricoid anteriorly, was now found to extend all round the posterior part of that cartilage; the same semi-cartilaginous structure was observed in the sac of the abscess posteriorly as anteriorly. This portion of the abscess occupied the place of the posterior crico-arytenoid muscle, its cavity was of a dark greenish colour, the size of a bean, and exhaled a gangrenous odour. There was no communication between this abscess and the cavity of the larynx, but it opened into the pharynx, about one inch and a quarter from the tip of the arytenoid cartilage. The cricoid cartilage was partly ossified and extensively carious; all the interior of the trachea was lined throughout by a gelatinous effusion of a reddish colour, appearing in some parts like coagulable lymph, and every where very adhesive; on scraping it away the tracheal mucous membrane was found softened and highly vascular, presenting a pale appearance in the larynx, but was of a light pink colour at the root of the epiglottis. There was no ulceration detected on any part of the internal surface of the larynx or trachea."

The same kind of gelatinous fluid noticed in the trachea, was also found in the right and left bronchus, the ramifications of the former being filled, even to those of the third and fourth order. In the upper part of the right lung were a few detached tubercles, some softened, and the bronchial glands were indurated and enlarged.

The disease in this case had probably, we might almost say had evidently, been chronic disorganization of the cricoid cartilage, terminating in abscess, and caries of that cartilage. On this supervened fever, and, on the fever, the acute laryngeal inflammation. Dr. Mac Adam is of opinion that the operation was decidedly of service. A consideration of the post-mortem appearances explains, he thinks, the immediate cause of the patient's death. The right bronchus was completely

plugged up, and the left nearly so, with a gelatinous effusion, which also lined all the interior of the trachea, proving, that intense bronchitis had existed, and rendering it evident, that the immediate cause of death was obstruction of the bronchial tubes, the consequence of effusion produced by inflammation of their lining membrane. While the patient retained sufficient strength to perform the respiratory efforts necessary to overcome this obstruction, and to expel a portion of the viscid mucus, enough of air was inspired to preserve life; this, however, was progressively diminishing, according as the effusion increased, and the patient's strength declined. The circulation also became gradually depraved, in consequence of the less perfect oxydation of the blood; another debilitating cause arising from this source was added to the exhaustion consequent upon long-continued laborious respiration, and the patient sunk when his powers ceased to be equal to those combined debilitating influences. Bronchitis, then, and its consequences, were the immediate cause of death, say Dr. Mac Adam seems disposed to think, that, had the bronchial inflammation been detected the day subsequently to the operation, local depletion, blisters, antimonial solution, and so forth, might have even protracted the duration of the patient's life. In this we fear the Doctor is too sanguine. "If I should meet with another case similar to the one I have been just considering, I would be disposed, very soon after the operation, to apply leeches to the upper part of the sternum, followed by a blister, and to put in practice the general treatment suitable to acute bronchitis, as far as circumstances permitted. In this case, the patient would probably have ultimately died, even if the bronchitis had been subdued." In the latter opinion, we agree with the Doctor. The disease in the neighbourhood of the larynx had proceeded too far to permit much rational expectation of success from any mode of treatment. The case is interesting pathologically as well as in a surgical point of view.

OCCCLUSION OF THE VAGINA.

The following is a curious and not uninteresting case, because it exhibits the possibility of conception although the vagina was closed to a very considerable degree. It is contained in our esteemed contemporary, the *American Journal of the Medical Sciences*, for February, 1835. We must give it in the words of the contributor, Dr. Hoillemin of Aux Cayes, Hayti.

Case. "Madame—— de——, when twenty-five years of age, had an exceedingly difficult labour, lasting three days; during which she had no other assistance than that of an inexperienced midwife. The external parts of generation, as well as the vagina, were attacked with violent inflammation, which was followed by an almost complete closure of the vagina, only a small opening remaining, scarcely sufficient to allow of the passage of a goose quill. She long suffered from incontinence of urine, and much difficulty in walking.

About June, 1830, Mad. ——, then twenty-seven years of age, first consulted me. She was at that time suffering with nausea, loss of appetite, progressive increase of the abdomen, swelling of the breasts, &c. I immediately recognised all the symptoms of pregnancy at the third or fourth month, and informed Mad. —— of it, who replied that it was impossible for her to be pregnant, since she could not cohabit with her husband, because her parts were closed, "*ses parties sont fermées*," (this was her expression.) The husband, who was present, confirmed all that his wife had said. Nevertheless, I assured her, that she was undoubtedly pregnant, and I did my best to tranquilize her great uneasiness, for she incessantly repeated that it was impossible for her to give birth to her infant.

The 30th of December of the same year, Mad. —— sent for me at midnight. Labour pains had just come on. On examination I found that the vagina was closed by a firm membrane, extending across it, and which was thickest laterally. Near the meatus urinarius,

a kind of fleshy band originated, which was lost in the partition. In the centre of this last there was a round opening, scarcely large enough to admit a quill, and the margin of which was thick.

I proposed to Mad. — to divide the membrane closing the vagina, to which she consented. After the uterine contractions had continued for six hours, I took advantage of the moment when the membrane was pressed forward and downwards by the membranes, and the head of the child to divide the margin of the opening, and then inserting the index finger of my left hand between the head of the infant and the partition, with my right hand, I passed the blade of a straight probe pointed bistoury upon the finger which served as a conductor, and cut the membrane from within outwards, on the left side, to the extent of an inch, and then waited the effect of the renewal of the uterine contractions. After an hour, during which these were strong and frequent, the opening not enlarging, and the membranous partition being constantly pressed down, I made another incision from within outwards on the right side, so that these two incisions formed a triangular flap, the base of which was towards the sacrum. The umbilical cord immediately protruded; the waters, which were discharged, were black, and exhaled a strong and disagreeable odour. Mad. — became covered with a cold sweat; had repeated faintings; her pulse was almost imperceptible, and the uterine contractions were infrequent. Suspecting that the child was dead, from there being no pulsation in the umbilical cord, and having great fears for the mother, I hastened to terminate the labour by delivering with the forceps. The child appeared lifeless; its surface was livid, indicating cerebral congestion. After dividing the cord, I allowed three or four ounces of blood to flow; I employed dry frictions over the cardiac regions, &c. and was not a little surprised to see the infant revive, as well as the mother, both of whom are at present in the enjoyment of perfect health.

Precautions were taken to preserve

separate the parts which had been divided, and to prevent their reunion; the opening of the vagina was thus re-established in its natural state. The triangular flap resulting from the two incisions gradually diminished, and at the end of two years no trace of it remained, and Mad. — could cohabit with her husband without experiencing any inconvenience."

The case is deserving of attention

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MELANCHOLY EFFECTS OF INORDINATE DEPLETION.

Professor Badham has recently related the case of a lady who appears to have been most profusely bled for *severe pain* in the head—and which, in all probability, was not accompanied by much, if any inflammation. The lady was 30 years of age, and five or six months advanced in pregnancy. She had experienced preceding abortions, and nearly lost her life by uterine hæmorrhage. For many years, too, she had suffered from severe hereditary headaches. By these affections, and the remedies employed, she was reduced to a state of great debility, her lips being blanched, and her countenance indicative of distress. She was attacked by one of these constitutional headaches, of a violent kind, and medical assistance was called in. The preliminary reflections of Dr. Badham, on the mistaken opinion which the medical man formed, on this occasion, we shall omit, considering them much too severe.

"One large bleeding from the arm (the blood from which exhibited no buffy coat) was succeeded by one hundred leeches at various times, for auxiliaries; this was the practice. The blood estimated to have been taken (during five days) was at first put at seventy ounces, but reduced to sixty (almost four pounds avoirdupois) by a later computation—an estimate which, however, I dare venture to consider as much below the mark, when I look at the agents employed. As to the leeches, blood thus drawn was not, it seems, to be scrupulously considered, or taken

at its apparent value. Alas! how much fatal mischief has this current absurdity of medical men not produced? and when will the unmeasured drain occasioned by leeches be looked upon as it ought, with more suspicion than venesection itself? That not the slightest relief was obtained may sufficiently prove the error of the application here; that the whole of the distressing consequences now to be stated, should have ensued, will occasion surprise. Had abortion been the only one—had it not been, in fact, the very slightest of those consequences—this admonitory narrative would have had no existence. Those consequences were, I admit unusual; but I believe many of them to be producible just as certainly, and as often, as such a practice shall be adopted on such a subject. Spasms, all but tetanic, of internal as well as external muscles, and attended with excruciating pain, placed her existence, for full a fortnight, in hourly danger. I found the unfortunate sufferer, at the end of even four weeks, still clenched and screwed by these spasms (now however, become very different, from the frightful violence of the still earlier days of her misery) to an extent most distressing to witness. I found her drenched in incessant sweat, and in such a state of deplorable debility, that she could not move her own limbs in bed, nor raise her head ever so little, if it rolled from the pillow; added to all which, that almost entire privation of sleep, which had allowed no respite to her pains for fourteen days, still continued to resist the various narcotics of which trial had been made.

The abortion of a six month's child had taken place on the 14th or 15th day from the attack, and on the 8th or 9th after the last of the bleedings; and it is worth while to remark, that the system was, at this time, so drained of blood that, the expulsion accomplished, not enough blood followed, either then or subsequently to stain a handkerchief. But far sadder consequences than all these are still to be related. Two or three days after the abortion her vision appeared to be failing, and this fatal suspicion was soon confirmed.

The last object in the material world that she ever saw, was the bright yellow gown of her female attendant.

At that period, I should have mentioned, when the spasms, perfectly uncontrolled by common remedies, were plainly destroying her, and when it was obviously impossible that life could resist much longer, an introduction of the most powerful medicines was commenced, under the personal superintendence of a medical friend who came from London to her assistance, and as I believe, saved her life by musk, opium, *beladonna*, &c.

But the measure of her calamities was not yet full; the senses of smell and of taste were also found to be perishing; and perish they did,—the first entirely and permanently; the second has to a certain extent recovered. Touch, together with all prehensible power, followed, or departed, with the others, and of course (for touch is the sight of the blind) greatly aggravated her misery. She did not know when her hand was pressed by another's or her pulse felt. Her arms and fingers were in perpetual cramp; and for one night she complained so much of difficulty of swallowing, that I was seriously apprehensive of tetanus; the rather as she had pains in the lower part of the spine, of great severity, and only capable of relief by the most violent pressure we could apply. As to the original pain of the head, it had left her; but it was succeeded by noises which never ceased, 'like the din of a great manufactory, or the noise of a thousand anvils,' together with what might seem an incompatible sensation of emptiness, 'as if the brain ached for want of blood*.' From the beginning her intellect had never been disturbed for one moment; neither disturbed nor excited; it was calm, collected, and equal to her situation; most sensible to the attentions paid to her; desirous of sparing the fatigue of those around; affectionate to the objects of her affection; considerate for all. But the headache did not remain without some probable explanation.

* See Dr. Bright on this subject.

Long after the mischief was done by blood-letting, many quarts of dark-coloured caustic bile, which scalded as it passed, appeared to refer the source of her original sufferings to disordered or suspended secretion of the liver.

Her life was spared. A slow convalescence, with many checks, at length began to take place; but though all the other functions have returned, the organs of sense have never rallied. She is utterly, and, at the end of six months, hopelessly blind; she cannot yet discern by touch any difference of surfaces, nor the difference of size between a large and a small coin; she cannot perceive any odours whatever of flowers or aromatics; she cannot smell a cigar, but can just smell ammonia.*

The above is a very melancholy case. We doubt, though we do not deny, the inferences which Dr. Badham has drawn. We doubt these inferences, because, in a long professional life, where the sphere of observation, public and private, was at least equal to that of the author, we never met with an instance where the loss of four pounds of blood, under any circumstances, occasioned such remarkable phenomena as are recorded in the foregoing case. On the other hand, we have seen several cases, in females, where a train of symptoms, not very different from those of this unhappy lady, occurred, without the loss of a single ounce of blood. We have seen the lower extremities paralyzed for years, accompanied by the most singular aberrations of different senses—all from hysteria—and all vanishing in the course of time. We hope and believe that the unfortunate case narrated By Dr. Badham will turn out to be one of these. But, at the same time, we dare not deny the justice of Dr. B.'s conclusions. It is possible, that in this case, the abstraction of so much blood may have led to the deplorable consequences which have been somewhat poetically portrayed by the narrator; but we think that he has not exhibited an exuberance of charity for the frailties of human nature, and

for the errors of judgment to which we are all liable. If it was capable of demonstration that the practitioner had completely mistaken the above case, Dr. B.'s language would still be too strong; but when we reflect that the error of judgment is not proved—what shall we say to the harsh judgment, which a brother practitioner has pronounced against his neighbor? No one will accuse us of the attempt to excuse delinquency, ignorance, or temerity, but for mere *errors of judgment* we ought to have some compassion. The public are quite prone enough to condemn us, on their own shallow reasoning—we ought not to put weapons in their hands, loaded with extraordinary charges, that are not perhaps legal or honorable after all.

ON THE EMPLOYMENT OF THE STETHOSCOPE IN THE DIAGNOSIS OF ANEURISMS OF THE THORACIC AORTA.
By G. GREENE, M. D.*

The diagnosis of aneurism of the thoracic aorta is confessedly obscure, and the majority of practitioners have both seen and committed mistakes in relation to it. Those acquainted with auscultation are aware that Laennec estimated the powers of the stethoscope in the investigation of diseases of the heart and arteries, at too low a rate, and probably he ranked its merits in the discrimination of diseases of the lungs too high. The object of Dr. Greene in the present paper is to shew that auscultation does really afford very valuable aid in enabling us to distinguish aneurism of the aorta. He relates three cases.

CASE 1. *Double Aneurism of the Thoracic Aorta—Sudden Death from Rupture of the Sac into the Left Bronchial Tube.*

"A sawyer was admitted into the Whitworth Hospital, House of Industry, on the 7th of April, 1834. He had been subject for the last two years

* Med, Gazette, July 25th, 1835

* Dublin Journal, May 1835.

to a cough, attended with great dyspnoea, and frothy expectoration. The cough seized him in paroxysms, generally at night. He also complained of irregular pains, of a lancinating character, through the chest. These symptoms became so severe and unremitting, that he was obliged to discontinue his business six months previous to his admission."

When Dr. Greene first saw this patient, the cough would last for half an hour at a time, and threaten suffocation. The slightest exercise brought on dyspnoea—there were darting pains in the chest, though the greatest distress was referred to the summit of the sternum—the breathing was laryngeal—there was a slight dysphagia—turgescence of the left jugular vein—no external tumor nor visible pulsation.—Such was the history, such the general symptoms. Let us now regard the auscultic indications.

"The chest sounded clear all over, on percussion; on applying the stethoscope, a distinct impulse was communicated to the instrument over the upper third, and to a short distance on either side of the sternum. The impulse was much stronger than that of the heart; it was not attended with any distinct bruit; respiration in left lung feeble, loud and clear in the right, especially on a forcible inspiration. There was also a distinct impulse communicated to the instrument for a considerable distance down the back, to the left of the spinous process of the vertebræ; no purring tremor could be detected; a distant but distinct bruit de soufflet in this situation; impulse and sounds of the heart normal. When the instrument was applied to the axilla, or to the back, in the situation mentioned, the respiration appeared to be almost laryngeal in the top of the left lung, but was natural in the right, and loud and distinct."

On the morning of the 12th of April, the patient was suddenly seized with hæmoptysis, accompanied with intense pain in the mammary region in the left side. A sort of mucous r  le was audible in the top and centre of the left lung. In half an hour the patient died,

with the lips and extremities cold and exsanguined.

Dissection. The heart was sound. "On cutting into the substance of the left lung, its parenchymatous structure was found to be injected with blood, which was also found in great quantity in the pleural cavity. The right lung was similarly injected in its posterior half, its anterior edge was emphysematous. The injected portions could easily be broken down by the finger. The aorta was enlarged, and on slitting it up atheromatous deposits were found between its inner and middle coat. From the anterior surface of the vessel, at the point where it winds round the left bronchial tube, an aneurismal sac was discovered about the size of a small orange; it communicated with the left bronchial tube by an opening just large enough to admit a probe. The interior was lined with fibrinous deposits, and it had slightly compressed the left bronchial tube. The œsophagus was situated to the right of the tumour. On removing the lungs, another aneurism on the anterior surface of the aorta was discovered, somewhat larger than the first, and corresponding to about the seventh dorsal vertebra. It had contracted strong adhesions to the posterior surface of the left lung, and the interior was also lined with fibrous deposits similar to the first."

CASE. 2. Aneurism of the descending portion of the Aorta. Sudden Death without Rupture of the Sac.

Ann Lee, æt. 27, admitted into the Whitworth Hospital, Jan. 8th, 1835. About two months previous to her admission, she had fallen down a flight of stairs upon her back, since which she had suffered pain in that situation. About six weeks before admission, she became affected with cough and dyspnoea, succeeded by difficulty of swallowing.

When Dr. Greene saw her, the cough was loud, harsh, of a peculiarly ringing character, and attended with a frothy and rather copious expectoration. It seized her in paroxysms, during which she was almost suffocated; it was particularly severe at night. There was

dyspnœa—difficulty in swallowing, referred to the upper third of the sternum, where the morsel seemed to stop, and required the aid of liquid to descend into the stomach—in inspiration the trachea was drawn deeply down behind the sternum—pain on pressure of the spinous processes of the third and fourth dorsal vertebræ, and pain, also, shooting from the sternum to the spine. Pulse 98, full, and regular—respiration hurried—catamenia deficient for the last six months.

“The following were the signs furnished by the stethoscope: A clear sound obtained all over the chest on percussion; the respiration in the right lung distinct, but accompanied by a kind of blowing sound, when the instrument was applied posteriorly, about the situation of the bronchial tube, or in the axilla in the right side. The respiration in the left lung was feeble, and sometimes nearly inaudible. An obscure impulse, accompanied by a bruit de soufflet, in the interscapular region. Both these phenomena most distinct at the left side of the spine, and confined to the situation where she complained of pain on pressure; they were most remarkable when the arterial system was excited by any sudden exertion. Anteriorly an impulse was communicated to the stethoscope at the sterno-clavicular articulation, and sub-clavian region of left side. The impulse was attended with a double sound, and was somewhat stronger than that of the heart. An obscure bruit de soufflet was heard in the same situation; the impulse and sounds of the heart were natural. She complained of pain when percussing the top of the sternum.”

We need not particularly mention the treatment which was antiphlogistic. Two days before her death, which occurred suddenly in the night of the 5th February, another stethoscopic examination was made, and as some alterations in the phenomena had occurred, we subjoin the results of the exploration.

“A strong double impulse a little below the sterno-clavicular articulation, at the left side of the median line of the sternum, accompanied by two distinct

sounds, and a clear bruit de soufflet. Impulse diminishes towards the heart, which retains its natural impulse and sounds. No expansive pulsation found on pressing the fingers deep behind the clavicles; left jugular vein turgid. Posteriorly, at the situation of the third and fourth dorsal vertebræ, a decided, and, apparently, a single impulse, accompanied with a bruit de râpe, communicated to the instrument. These signs diminish in intensity as the stethoscope is applied down the spine at the left side. Respiration presents the same characters as on the first examination, but more clearly marked. On pressing the ball of the thumb forcibly to the spine, at the situation of the impulse, a tremor is communicated to the hand; the pressure produces pain. On looking along the anterior surface of the chest horizontally, a distinct elevation perceptible at the top of the sternum, where percussion also produces pain, and a pulsation can be felt; no dullness in the situation of the impulse.”

Dissection. The heart was sound. An aneurismal tumor was discovered arising from the descending portion of the arch of the aorta, where it is in contact with the left bronchial tube, and stretching across the vertebræ to the right side. The œsophagus ran directly in front of the tumor, separating it from the bifurcation of the trachea. At the junction of the transverse with the descending portion of the aorta, a smaller aneurism large enough to contain a bean, extended behind, and pressed upon the left bronchial tube, between it and the œsophagus, and communicated with the aorta by a well defined opening. The larger tumor rested upon the bodies of the third and fourth dorsal vertebræ; the osseous portion of which was absorbed, leaving the intervertebral substance prominent. This portion of the spine formed the posterior wall of the sac, the pressure of which had somewhat flattened the right bronchial tube. The sac communicated with the aorta by a well-defined opening, large enough to admit a man's thumb. Its interior was lined with a firm fleshy-looking coagulum, and did

not appear to contain much recently coagulated blood. Its size was about that of a small orange, and the walls were perfect.

CASE 3. Aneurism of the Thoracic Aorta—Sudden Death from Rupture of the Sac into the Left Bronchial Tube.

This case is possessed of the more interest, as an accurate diagnosis was made at an early period by means of the physical signs.

Michael Hughes, æt. 38, was admitted into the Meath Hospital under the care of Dr. Stokes. Five months previously he caught cold, and shortly afterwards became affected with pains in the back and sides, and with dyspnoea. These symptoms increased. On admission the dyspnoea was great—there was cough, loud and ringing, and of a peculiar croupy character—scanty expectoration of frothy mucus—pulse 86 and full. The auscultic indications were as follow:—

The whole of the chest sounds clear on percussion. Respiration in the right lung intensely puerile, altogether absent in the superior portion of the left, and only feebly audible in the inferior portion. On applying the stethoscope to the left axillary region, and the patient being desired to draw in a deep breath, no sound is heard during the first half of inspiration, but during the latter half the air appears to overcome some obstruction to its entrance, and suddenly rushes in to expand the lungs. The left side of the chest is almost immovable during respiration, but the right acts freely. On applying the hand to the upper part of the left side, no vibration of the voice could be detected. The vibration is very feeble below on the same side, but well marked on the right side; impulse and sounds of the heart natural; a strong double pulsation is heard over the sub-clavicular region of the left side, also over the postero-superior portion of the same side, and on applying the hand over the former situation a distinct impulse is communicated to it; no bruit de soufflet could be detected.

A short time after this, a strong double pulsation could be heard across

the right clavicle, and the pulsation in the sub-clavicular region, as well as over the scapular had increased, with a strong impulse below the middle third of the clavicle; after the patient had walked several times up and down the ward, a sharp bruit-de-scie was detected in the latter situation. When the patient remained quiet for a short time this disappeared, but again returned after exercise.

Subsequently the patient was admitted into the Richmond Hospital, and again an examination of the physical signs was resorted to. These are the particulars.

Anteriorly the right side of the thorax sounds well on percussion; a little dulness in the sub-clavicular and mammary region of the left side; respiration in the right lung remarkably loud and clear, very obscure in the left lung, except on taking a deep inspiration, which produces a feeble vesicular murmur. A strong impulse communicated to the stethoscope, two inches below the clavicle, and about an inch and a half to the left of the median line of the sternum; impulse also perceptible across the sternum to the right clavicle; it is greater than that of the heart, and appears to be double; it is also perceptible to the hand. A slight impulse communicated to the stethoscope at the left side of the second and third dorsal vertebræ; no bruit de soufflet could be detected in this situation, nor anteriorly except after great exertion; pain on percussion of the upper third of the sternum, and in the situation of the vertebræ above-mentioned.

We need not specify the general symptoms. They were as before with the exception of being aggravated in degree. We shall state, however, that the impulse and sounds of the heart were natural. He expired suddenly in a fit of coughing, during which he spat up a quantity of blood.

On dissection an aneurismal tumor was found arising from the descending portion of the aorta, and pressing upon the left bronchial tube; which was considerably indented and narrowed. The posterior wall of the sac was made up by the bodies of the second and third

dorsal vertebræ, the osseous portion of which was absorbed, and presented nearly the same appearance as in the case last detailed. The interior of the sac was lined with a fibrous coagulum, and it opened into the left bronchial tube; the œsophagus was slightly pushed to the left side; the interior of the aorta was crowded with atheromatous depositions between the internal and middle coat; the heart and pericardium were natural.

We have abbreviated or omitted all particulars not directly connected with the diagnostic evidence afforded by auscultation and percussion. The gist of the paper is this, and this only, that aneurisms of the aorta in the thorax may be distinguished with more facility by the aid of an examination of the physical signs than is usually imagined. This is the point which our author and ourselves are both anxious to insist upon, and irrelevant matters may be advantageously dispensed with.

We feel in doubt whether it is worth while to offer any remarks on an objection which has frequently been made to investigations and to cases of this nature, an objection as often refuted as advanced, and as often repeated as refuted. The enemies, for there are such, of pathology, always harp on the *cui bono* of the diagnosis of incurable diseases. What matters it they say, if we do know that there is aneurism of a certain part of the thoracic aorta? Can the auscultators cure this better than their neighbors? The gentlemen who indulge in this philosophical train of reflection should recollect two circumstances not altogether unimportant. In the first place, if we determine that a malady is incurable, we are enabled at all events, to avoid unnecessary or injurious interference, and to offer the patient or the patient's friends that accurate information which is often of benefit to them, and always creditable to the physician and his science. In the second place, it follows, as a logical sequitur, and a practical result, that if we are able to determine diseases that cannot be cured, we are also able to distinguish those other diseases which can. Surely this is no small matter.

We almost feel ashamed of arguing the question—we are tempted to indulge in an incredulous smile at the thought that any reasonable person can possibly object to whatever gives additional certainty to physic.

We may now revert to the subject more especially before us—the deductions which may be fairly drawn from the preceding cases. Those deductions are important to the physician who is anxious to obtain the greatest possible certainty of diagnosis. Let us hear what Dr. Greene has to observe.

“On examining these cases, it will be perceived that there were some symptoms common to them all. The first I shall consider is the remarkable difference in the respiration of the two lungs, and I am the more anxious to call attention to this fact, from its having been much insisted on as an additional means of assisting our diagnosis in this disease, in a valuable paper on the pathology and diagnosis of aneurism by Dr. William Stokes, in the fifth volume of the Dublin Medical Journal.

The value of the sign, according to Dr. Stokes, consists in this, that the absence of respiration cannot be accounted for by any lesion of the lung, discoverable by auscultation or percussion. The fact of there being a clear sound on percussion, and at the same time a feebleness of the respiration, naturally leading to the conclusion that some impediment must exist to the entrance of the air into the lung on inspiration. He also suggests that perhaps it may be found, from further observations, that a solid tumour pressing on the bronchial tube will produce a permanent feebleness of respiration, but that an aneurismal tumour may allow of the occasional re-appearance of it, according to the variable nature of the contents of the sac. I could not perceive, however, in any of the cases above mentioned, that this latter phenomenon took place, but I found the fact of a feeble respiratory murmur, combined with a forcible entrance of the air into the bronchial tube on deep inspiration, of great assistance in forming a diagnosis.”

Dr. Greene has seen one case of a

solid tumor compressing the trachea. Yet the case was hardly of that description neither, for the tumor, an enlarged and diseased bronchial gland, was situated at the bifurcation of the trachea, on which it exerted no mechanical pressure. In this case there was no appreciable difference in the respiration of the two lungs. The patient had the symptoms of acute bronchitis.

The modification of respiration in a lung, in consequence of the pressure exerted by an aneurism on a bronchial tube or on the lung, is not adduced by Dr. Stokes as a pathognomonic sign of the disease. Any tumor capable of exercising mechanical pressure may produce the same effect. But if the general or other physical signs of aneurism be displayed, this assists very greatly in enabling us to form a more accurate opinion of the nature of the malady. In the inferior part of the descending aorta within the thorax, the pressure of an aneurismal or of any other tumor can scarcely be felt by a bronchial tube. The lung itself may be compressed, but the bronchial tube is too distant to be implicated.

"The next sign I shall consider as having occurred in these cases, is the fact of an anormal pulsation in the interior of the chest. It will be recollected that Laennec did not place much reliance on this symptom, except when it occurred under the form of a strong single impulse. Several circumstances, however, may prevent us from perceiving this single impulse, when the chest is examined anteriorly. The proximity of the tumor, for instance, to the heart, as at the origin of the aorta, will necessarily render the occurrence of this phenomenon less available for diagnosis, from the contiguity of the impulse of that organ. Again, should the tumour be situated at the descending portion of the aorta, its impulse will be masked by that of the heart which lies before it. These difficulties will be increased in hypertrophy of the organ; notwithstanding these obscurities, however, the sign alluded to is a most important one. It has been remarked by Dr. Hope, that when this phenomenon occurs posteriorly, particularly when accompanied

with a sound of a rasping character, it is almost a positive indication of the development of aneurism, and I found this phenomenon to be well marked, particularly in the case of Lee."

Dr. Greene observes that two sounds may be heard in an aneurismal tumor. Of this there cannot be a question. In aneurisms of the ascending part of the thoracic arch, we have heard the two sounds with as much distinctness as in the heart itself.

"With reference to those symptoms which, in the language of systematic writers, are called 'general,' many differences must of course occur, according to the situation which the sac occupies. It will be observed, for instance, that in those cases no assistance was derived from a difference in the radial pulsations, or from numbness or œdema of the upper extremities. The absence of these symptoms, whenever the physical signs of an aneurism are strongly marked, may, perhaps, lead us with more certainty to a knowledge of the part of the vessel which the disease occupies, and also to the progress it is making. This is so obvious from considering the anatomy of the aorta, that I need not here make any lengthened observations upon it. In fact, when we have the physical signs above adverted to, and those general symptoms absent, we must infer that the tumour is below the origin of the great vessels going to the head and upper extremities; and if, in the course of the disease they make their appearance, we may infer that the sac is expanding upwards, and exercising a pressure on them. The same observation will apply to the absence of numbness and œdema of the upper extremities."

There cannot be a stronger argument in favour of the value of the physical signs, than the indeterminate and fallacious character of the general symptoms. Functional and organic affections of the heart, affections of the lungs, and aneurisms of the thoracic aorta, all produce symptoms of a similar or nearly similar character, though the functional or organic diseases that give rise to them vary very widely in character, in nature, and in severity.

Dyspnœa is one of those general symptoms. It was present in the cases related by Dr. Greene, but every body knows that it is present, also, in almost all cases of disease of the heart, when at all advanced in duration or extent. We recollect an instance of hypertrophy and dilatation of the ventricles, attended with slight dilatation of the ascending arch of the aorta, in which the dyspnœa was more distressing than we ever, before or since, observed it. Yet, in that case, there was no mechanical pressure exerted on the lungs or on the bronchi.

There can be no question that an accurate acquaintance with the general symptoms of affections of the heart and arteries, is indispensable. The acute observer, if an accurate pathologist, will often at a glance, at the mention of a symptom, or a few symptoms, have a train of suspicions and reflections excited, which will lead him, by a rapid process, to a close approximation to the truth. How frequently does a patient present himself, with the idea that he is labouring under indigestion. He complains excessively of flatulence and oppression at the præcordia; but the puffy face, the short breath, and the strong pulse, point at once to the heart or the larger bloodvessels as the probable seat of the affection. The physiognomy and the general features of disease are subjects of high interest, and the utmost consequence to the practical surgeon or physician. It is the power of deciphering these characters with rapidity which confers that diagnostic acumen, that more, perhaps than any other quality, leads the possessor to reputation and success.

Dr. Greene observes, with reference to dysphagia, as a symptom of thoracic aneurism, that:—

“The difficulty of swallowing is more likely to be experienced in those cases where the disease occupies the transverse and descending portion of the arch, than elsewhere. In this situation the œsophagus is more fixed, as it were, than in any other portion of its course, except where it passes through the diaphragm. From its comparative mobility, in the upper and

lower portion of its course, it may in a great measure elude, for a considerable time, the pressure of the tumour. When this symptom does occur, it only becomes valuable when taken in conjunction with the physical signs, and of course cannot be relied upon if it occurs as an isolated phenomenon. The importance in such a case, of being able to ascertain its dependance on the pressure of an aneurismal tumour, is obvious from the fact of probangs having been passed down in this disease, under the supposition that the stricture was unconnected with it.”

He remarks the turgescence of the left jugular vein, which occurred in each of the three cases recorded. This general symptom is so fallacious, that we would not place much dependance on it. Turgescence and engorgement of one or both jugulars is so frequent in various affections of the heart, and so little of certainty seems to attend its explanation, that, although a suspicious general feature, it is no satisfactory index of the actual nature of the alteration.

Dr. Greene very properly dwells on the necessity for studying all symptoms and all signs in connexion with each other. Diagnosis, in obscure or doubtful cases, is a calculation of probabilities—the more circumstances are omitted, the more likely the calculation is to be erroneous. Hence we see the blunders very frequently committed by men of eminence in the profession. Trusting to their experience, they seize upon one, or a very few symptoms, and snatching an opinion on these insufficient data, they commit some palpable mistake.

The result of every-day observation and experience, and the study of recorded cases combine to prove, that aneurism, seated in the arch of the aorta, is distinguished with infinitely more facility than when the tumor is seated lower down. The reasons are so obvious, that we need not dwell upon them. Aneurisms of the lower part of the thoracic aorta are frequently, perhaps they are generally overlooked. As yet we have no satisfactory symptoms nor physical signs to determine their exis-

tence. Let us hope that accurate, very accurate observation will do something for us.

Dr. Greene offers what we must denominate suggestions for a diagnosis. They are these:—

“1st. An impulse limited in extent, and decreasing in intensity as the stethoscope is applied above or below the situation of the second tumor. This sign is more valuable, if it occurs on the right side of the spinal column, which is not the situation, anatomically speaking, where an impulse should be perceived.

2d. A bruit de soufflet or a bruit de râpe, heard in the suspected tumor, and not observable in any other considerable portion of the aorta or in the heart. It is necessary in every instance to examine the heart, for within these few days, I have met with a case, in the Whitworth Hospital, where a loud bruit de râpe accompanies the second sound of the heart, this bruit is heard down the spine along the course of the aorta. It is heard also in the carotid and brachial arteries, even to the elbow-joint. I have satisfied myself that in this case a double sound is heard in these arteries. The name of the individual in whom these phenomena occur is William Connor, and several of the class of the Whitworth Hospital have heard both the bruit and the sounds in the situations mentioned.

3rd. The production of pain on pressing the vertebral column over the site of the impulse.

4th. The production of pain referred to a portion of the lung near the situation of the impulse, on a forcible inspiration.

5th. Dysphagia referred to some point below the middle third of the sternum, or to a point nearly opposite the impulse.

Lastly, it may be worth while to contrast the pulsations of the abdominal aorta in the epigastrium, with other arteries and with the impulse of the heart.

We should take into consideration also (provided the above signs are well marked) the evidence we may obtain with respect to the position of the tu-

mour from the absence of some symptoms; such, for instance, as the non-existence of a laryngeal croupy cough; difference of pulsation in the two radial arteries, or numbness or œdema of the upper extremities.”

We think we have said enough upon this subject. We would intreat the attention of practitioners to it. Diseases of the heart and of the larger arteries are extremely frequent; but, what is singular, they are as frequently mistaken. Scarcely a week passes, but we see some patient in whom cardiac disease, or enlargement of the arch of the aorta, has been overlooked—a remarkable and almost unpardonable error, considering the advances that have lately been made in the physical means of diagnosis.

TRAUMATIC TETANUS CURED.

There are so few instances of recovery from this dreadful disease, that it is consolatory to be able to relate a fortunate termination. The case is related in the 5th vol. of the Calcutta Transactions, by Mr. Grant. The patient was a PARSEE, who had received a slight contused wound in the face, and a fortnight afterwards exhibited unequivocal symptoms of trismus. Some mercurial ointment and camphor had been rubbed on the side of the face before entrance into hospital. The pulse was quick, but there was no other constitutional disturbance. One hundred drops of laudanum were given him at bed time—the warm bath—belladonna plaster. Next day he seemed a little better, and a quill could be got into the mouth to inject nourishment. Fifty drops were given the second night, the bath to be repeated. A turpentine injection was ordered to obviate the constipating effects of the laudanum. Next day he could open the jaw half an inch. Medicines as before. On the fourth day he retrograded much. He was ordered three grains of extract of belladonna. Fifth day, the pupils dilated. The medicine to be repeated, and to have an enema twice, each con-

taining fifteen grains of tartrite of antimony. *Sixth day.* The injections had produced a general feeling of coldness and weakness, but no vomiting. The second enema was followed by two motions. Could not swallow pills. Sixty drops of laudanum to be given. To have the warm bath *usque ad deliquium*. These remedies, with some variation, were continued several days. On the 12th day opisthotonos occurred, and rendered the case more hopeless. Was ordered two grains of extract of stramonium every two hours. This seemed to afford relief, and the medicine was continued in smaller doses. On the 18th day, the stramonium was omitted, and ten grains of calomel with three grains of opium were given. The bowels were kept open by enemas. He continued to mend, though slowly, from this date.

Another case somewhat similar, is related in the same volume, by Dr. Gilmore, where tetanus followed a severe sword-cut in the thigh. This patient was freely bled after the spasms had commenced—and the treatment consisted chiefly of calomel, camphor, soda, and purgatives. One of these purgatives produced vomiting and purging, during which large indurated masses of feculent matter were discharged. From this time the symptoms became more favourable, and recovery took place.

TETANUS TREATED BY TARTARIZED ANTIMONY.

This case is related in the Dublin Journal for July last, by Mr. Woodward. The patient was a labourer, and was found by Mr. W. labouring under all the symptoms of tetanus, opisthotonos. These had been gradually coming on for two days. No other cause but exposure to cold and wet could be assigned. He had been bled by an apothecary, without relief. Mr. W. first ordered him two grains of calomel with eight of Dover's powder, every three hours—blister—turpentine enema, &c. The symptoms became worse. An antimonial solution (a grain to the ounce) was given in doses of a

desert spoonful every hour, unless considerable sickness ensued. A turpentine injection brought away much black and fetid fæces. The pulse fell—much weakness was produced—the muscular rigidity diminished—and he swallowed better. The doses of the antimony were lessened—and the patient gradually recovered.

ON TYPHOID PNEUMONIA By Dr. HUDSON.

Inflammation of the lungs, accompanied by a typhoid fever, instead of a strong inflammatory one, is a disease well known to practitioners in the army and navy, who had seen much service last war. In the winter time, and after disasters by flood and field, pneumonia typhodes was a very common and a very fatal disease. The French prisoners, in the different dépôts suffered severely from it, and so did our troops after the retreat of Sir John Moore from Spain. In addition to the usual symptoms of pulmonic inflammation, and those of an aggravated character, we have, in this disease, great prostration of strength, feeble, rapid pulse, head-ache, delirium, ardent thirst, and sometimes bilious vomiting, partial cold sweats, diarrhoea, black dry tongue, fetid breath in bad cases, with thin and sanious, or sanguineous expectoration. Its treatment is very difficult, as it will not bear well that depletion which is necessary to quell the local inflammation; and yet, if the pulmonic inflammation is not subdued, the consequences are fatal.

"The *physical signs* are occasionally perfectly latent, frequently partially so; and from a careful observation of a very considerable number of cases, this latency has seemed to me to bear a certain relation to the symptoms, or rather the pathology, which would lead to a threefold division into—

1. Cases in which the typhoid type was connected with a congestion of the lung, independent of inflammation; the effect of which was to cause the signs of the latter to become latent either wholly or in part.

2nd. Cases in which this latency co-existed with gastritis, the typhoid type depending probably on the latter.

3rd. Cases of typhoid pneumonia, with more intense gastritis, and without modification of signs.

I am indebted to the kindness of Dr. Stokes, for permission to make use of the reports which I furnished of a number of cases which occurred in the Meath Hospital, in the early part of 1833, when I acted as his clinical clerk. The remainder of the cases fell under my own care in the Navan Fever Hospital, during a recent epidemic of typhoid pneumonia."

Several cases in illustration are minutely detailed, and deserve attentive perusal, in the Dublin Journal, where they are published. We give the following extract respecting the *latency of physical signs*.

"I shall offer a few remarks on the *latency of signs* sometimes met with in the foregoing and other cases of this disease. This consisted principally in the absence of what is considered by some the pathognomonic sign of the first stage, crepitating râle; sometimes even in that of the second also, bronchial respiration. It has been observed, that in some instances where a few hours before no signs of pneumonia were present, dulness on percussion and bronchial respiration were found established, in others a degree of dulness on percussion, and feebleness of respiration, denoted the existence of a congestion which slid into solidification, without the signs of the first stage intervening. My inference from these facts is, 'that the view of those who suppose that this disease is essentially a complication of pneumonia, with a superadded passive congestion,' is correct; and I would answer the objections which may be made to the truth of the fact, and the validity of the inference, in this way. It, 'the crepitus,' had not *passed* before I saw the patient, as the disease sometimes seemed almost to begin, and commonly progressed under my observation, and that of others. My examinations were purposely so frequent, that it could scarcely have escaped in the mean time, and yet the

disease was traced onwards from a very small portion, till nearly the entire organ was engaged in some cases without crepitus being once heard, and in others a mere trace of it, until resolution or softening commenced. Then as to the inference; the proof that the disease is a passive congestion rests not merely on the signs, but also on the general symptoms and appearances on dissection, and is strengthened by the observation of the effects of bloodletting; these were strongly marked in Malone (March 3rd), but even more so in the following case, a brief report of which I shall abstract from my note-book."

In two of the cases detailed by our author, there was a remarkable phenomenon—"tympanitic clearness, on percussion, over a solidified lung, without air being present in the pleura." This clearness of sound cannot be described in words. It is sometimes as clear as in cases of pneumo-thorax. It cannot be confounded with the sound of the healthy side of the chest—and it is still more different from that of a hepatized lung. The following were the auscultic signs when Case 7 was brought into hospital. The pulse, meantime, was 132, and the respiration 60 in the minute.

"Signs: on percussion the right side anteriorly gave a healthy sound; the left a sound *precisely the same kind as that produced by percussing over the stomach or cæcum*; posteriorly there was dulness over the spine and upper part of the scapula; respiration was tracheal under the clavicle; dull below and over most of the anterior of this side; a very feeble crepitus was heard, with strong resonance of voice; over the entire side, posteriorly a very feeble murmur of respiration, nearly quite inaudible in the upper portion; bronchitic râles over the right side."

Dr. Hudson having met with four cases of this kind where dissection was permitted, he gives a short account of the appearances *POST MORTEM*.

"The first, which at the time surprised me not a little, was that of a man named Drillon, who died of extensive inflammation of the left lung in the Meath Hospital in the spring of 1832.

At the close of this case, from the *hollow* sound on percussion of the lower part of the left side (previously quite dull) a pretty general opinion existed, that a pneumonic abscess had formed, and burst into the pleura. The side was punctured accordingly, but no air escaped, and farther dissection shewed the pleura adherent to two-thirds of the lung, red and solid, but *no abscess*. The next was a man who presented himself at the same hospital, with the history and symptoms of phthisis, and on percussion under the right clavicle, there was such a remarkable muffled tympanitic sound, with tracheal respiration and reasonance of voice, that all who heard these phenoma expected to find a large tuberculous cavity; dissection however, showed the lung hard and solid throughout from *chronic pneumonia*. The other two cases of Malone and Smith were similar to that of Drillon. It seems to me very obvious, that these cases cannot be brought under the explanation given by the high authorities just quoted, and I confess myself quite unable to give one which would be considered more satisfactory."

We think this phenomenon is one of the most puzzling which we have ever heard of in our difficult art!

In respect to treatment, Dr. H. saw the bad effects of free bleeding. Local bleeding was beneficial—but the most successful practice was by means of calomel in large doses. "The least I can say of this mode of giving mercury in inflammation is, that it has never surprised me." The dose was a scruple, repeated in six hours. The following is the chief and last inference which Dr. H. draws.

"4th. That the epidemic constitution of the disease, and its pathological conditions (connected as both seem to be, with an altered state of the blood), often combine to render these cases prone to run into gangrene, and that they are otherwise tedious and intractable, and generally require the early and liberal use of stimulants, as well as the prompt but cautious employment of the most active means for subduing inflammation; and, I think, the neces-

sity for the former may be stated to be in proportion to the degree of prostration; and the extent of passive congestion as indicated by dullness on percussion and nullity of all respiratory phenomena."

The paper is very creditable to Dr. Hudson, and has recalled our minds to many a harassing and distressing scene which we have witnessed in the late war, both at home and abroad!

A SERIES OF TWENTY PLATES, ILLUSTRATING THE CAUSES OF DISPLACEMENT IN THE VARIOUS FRACTURES OF THE BONES OF THE EXTREMITIES. By G. W. HIND, M. R. C. S. Formerly House-Surgeon to the Middlesex Hospital, late Curator to the Museum of Anatomy in the University of London. Lithographs, folio, bds. London, 1835.

The object of this very meritorious series of Lithographic Plates is, as our readers may observe from the title-page, to exhibit, in a plain and striking manner, the causes of displacement in the various fractures of the bones of the extremities. The work is appropriately dedicated to Sir Charles Bell, whose pupil the author formerly was.

In the first place are shewn the causes of the displacement of the clavicle, in fracture of its shaft; the subclavius muscle is accurately exhibited, drawing the outer portion downwards and inwards.

In the second plate, the coracoid process is seen broken, and its extremity drawn downwards and inwards, by the short head of the biceps, the coracobrachialis, and the pectoralis minor.

In the third plate, the fractured extremity of the acromion is drawn downwards and forwards by the deltoid muscle.

In the fourth plate, the neck of the scapula is broken. The glenoid portion is carried downwards by the weight of the arm, yet the glenoid cavity still remains applied to the head of the humerus, by the action of the long heads of the biceps and the triceps.

In the fifth plate, the neck of the humerus is fractured. The principal displacement results from the pectoralis major, the latissimus dorsi, and the teres major drawing the upper extremity of the shaft of the bone inwards.

In the sixth plate, we observe fracture of the humerus between the insertions of the axillary muscles and that of the deltoid. The former muscles pull the upper portion inwards, while the deltoid drags the lower portion outwards.

In the seventh plate, the fracture is below the insertion of the deltoid. The displacement here depends greatly on the direction of the fracture.

In the eighth plate, the fracture of the humerus has occurred immediately above the condyles. The displacement is considerable, and simulates dislocation backwards of the radius and the ulna. The lower portion glides backwards over the broken surface of the upper portion by the combined actions of the brachialis anticus and biceps, which are situated on the anterior part, and by the triceps which is on the posterior part.

In the ninth plate, there is fracture of the coronoid process of the ulna. This process is drawn up by the brachialis anticus. The olecranon process is also seen fractured, and drawn upwards by the triceps.

In the 10th plate, the neck of the radius is broken above the insertion of the biceps. This pulls the lower portion forwards, upwards, and inwards. The radius is also drawn broken near the centre.

The eleventh plate portrays fracture of the shaft of the ulna, and fracture of the radius and ulna near the centre. The pronator quadratus, in both, plays the most important part, in causing the broken bone or bones to approximate.

In the twelfth plate, we are shewn fracture of the lower ends of the radius and ulna. This is a fracture often mistaken, and difficult to treat; yet it is far from being uncommon. The appearances greatly resemble those of dislocation of the carpus backwards. The force being generally applied on the palmar aspect, the lower portions are drawn upwards and backwards by the combined action of the flexors and ex-

tensors. Perhaps, however, it is the superior power of the flexors which tends to this effect.

In the thirteenth plate, we descend to the lower limbs. The superior portion of the trochanter major is broken off, and drawn up by the glutæus medius and minimus.

In the fourteenth, we have fracture of the neck of the thigh-bone within the capsule. The mass of rotators, the glutæi, and the muscles of the thigh, combine to draw up and evert the shaft of the femur, and the limb.

In the fifteenth plate, there is drawn fracture of the femur, below the trochanter minor. The upper portion, comprising the trochanter major, is drawn upwards, nearly at a right angle by the action of the muscles inserted into the trochanter minor—the psoas and iliacus.

The sixteenth plate displays fracture of the shaft of the femur, near the centre. The lower portion is drawn upwards and backwards, chiefly by the operation of the adductors.

In the seventeenth plate there is fracture of the femur, immediately above the condyles. The lower portion is drawn backwards by the gastrocnemius, plantaris, and popliteus.

In the eighteenth plate, are delineated fractures of the patella.

In the nineteenth, we find fractures of the tibia and fibula. The displacement depends greatly on the direction of the fracture.

In the 20th, the last plate, we are presented with fracture of the inner malleolus, and Pott's fracture of the fibula.

We have run over the subjects of these several plates. It remains for us only to speak of their execution. This is bold, pictorial, and correct. It is seldom that we see such vigour in anatomical plates. Mr. Hind is a first-rate draughtsman, and has caught his inspiration from the masterly pencil of his preceptor, Sir Charles Bell. Altogether we think the work both admirably executed and extremely useful. To our young friends it will be a very valuable acquisition—to many of our old ones it would be highly useful. We have placed it in our own library.

BRITISH ASSOCIATION.

Our brethren of the Green Isle have had a rare intellectual banquet this year, and their numerous visitors from various parts of the world have had a double feast—spiritual and chylopoietic! Many a John Bull and Sawney M'Grigor—many a sprightly Frank and solemn German, will long remember the hospitality of Paddy's land! There appears to have been a remarkable and happy mixture of feasting, fun, and philosophy, on the banks of the Liffey, during the jubilee of science this year—such a combination as has not hitherto been seen, and such, we fear, as will not again obtain. The city of intellect in the North, and the great mart of commerce in the West, may hang their heads—the former has already been cast into the shade, and the latter may look to a similar fate, in the course of next August! But we must come to the philosophy, and lay aside the feasting.

Our indefatigable contemporary of Dublin has dedicated nearly one hundred pages of small type to an account of the proceedings carried on by the medical section alone—and from these ample details we shall draw largely in the present number, omitting, for the present, the foreign department, as not so interesting to the great bulk of our readers as the transactions of the British Association must necessarily prove.

First day, 10th August. President,
Dr. PRICHARD.

Dr. B. Graves read an interesting paper on the internal use of chloride of sodium in fever, from which we make the following extract, as embodying the pith of the practical portion of the communication.

“With respect (said Dr. G.) to the time for its exhibition, and the cases to which it is adapted, the following remarks may be made. When the early stage of fever is past, when all general and local indications have been fulfilled, when there is no complication with local disease, when the patient lies sunk and prostrated, when restlessness, low

delirium, and more or less derangement of sensibility is present, when the body is covered with maculæ, and when the secretions from the skin and mucous membranes give evidence of a depraved state of the fluids, it is then that the chloride of sodium may be prescribed with the most decided advantage. The mode in which I prescribe it is in doses of from fifteen to twenty drops every fourth hour, in an ounce of water or camphor mixture. How it acts I will not pretend to explain; it is sufficient to say, that there is no remedy from which, in such cases, such unequivocal benefit is derived. It operates energetically, though not very rapidly, in controlling many of those symptoms which create most alarm. It seems to counteract the tendency to tympanitis, to correct the fetor of the excretions, to prevent collapse, to promote a return to a healthy state of the functions of the skin, bowels, and kidneys; in fact, it appears admirably calculated to meet most of the bad effects of low putrid fever. To those who have witnessed its efficacy, it is unnecessary for me to say any thing. Of course it will fail, like all other remedies, when the disease has reached a certain point of intensity in individual cases. There is scarcely any acute disease, to which the human body is liable, which may not in some particular persons assume an intensity capable of baffling all the effort of medical skill. This, however, is no argument against the employment of a remedy of extensive utility and unquestionable value.

Although it is not my intention to give an account of what has been done in France with respect to the exhibition of this remedy, yet I may mention, that it has been extensively tried in fever by Chomel, and as I have learned with great success. This excellent physician is still, I believe engaged in making further clinical experiments on the subject. In the *Gazette Medicale de Paris*, published on the 28th of last February, we have an account by Dr. Dor, of Marseilles, of several cases of typhus,

in which the chloride of sodium was found beneficial in 1833. He attributes a more rapid amendment to the use of this remedy than I have even seen follow from its exhibition, and he also asserts, that if not given with great caution, it produces a very tedious convalescence. In the latter remark, especially, I cannot concur; for all who witnessed this mode of treatment here, were struck with the security and quickness of recovery which ensued in those cases where it had been employed.—Perhaps, the precaution we adopted of always diminishing, as soon as possible, the strength and frequency of the doses, rendered the results in our hands more satisfactory than those obtained by Dr. Dor.”

Dr. Graves concluded his observations by reading a letter from his colleague Dr. William Stokes, in which the use of this remedy is stated to have been followed by the most satisfactory results. It gradually but steadily removed all the bad symptoms, and in all cases the patients had most favourable convalescences. Dr. Stokes remarks, that all these cases recovered without any evident crisis.

DR. HOUSTON.

The next paper, which was a very extensive one, exhibited the peculiarities of the circulating organs in living animals, by Dr. J. Houston. We can only spare space for one extract from this elaborate paper, and the discussions to which it gave birth. The following are the peculiarities which enable the whale and other air-breathing animals to dive into the recesses of the ocean, with respiration suspended for fifteen or twenty minutes, and yet without injury to the heart or lungs.

“And, first, as to the porpoise,—(*delph, phocæna*.) This animal in its organization resembles, most of any, the whale, of which, indeed, it may be considered a miniature. Its heart is very powerful, and the right ventricle bears a much greater proportional capacity and thickness than that in land animals, a provision obviously connected with the greater resistance which the lungs occasionally offer to the passage of the blood. The *venæ cavæ* are also

very capacious, and all the great veins leading to them are either remarkably numerous, large, and tortuous, or formed into reservoirs, capable of holding nearly all the blood of the body. When the abdomen of a porpoise is opened, the whole inner surface of the parietes, but particularly that along the back and sides, presents a livid hue—an appearance arising from the extraordinary congeries of veins, under the peritoneum, distended with dark coloured blood. When the canal in the vertebræ is exposed, all the space not occupied by spinal marrow or nerves will be found filled with large veins of remarkable transparency, devoid of valves, and arranged more like the sinuses of the *dura mater*, than like ordinary vessels. The branches and trunk of the *vena azygos* are also much bigger than usual. The *vena hepaticæ* are of great width, and with the other veins alluded to are capable of holding, without bursting, all that excess of blood which the asphyxiated condition of the lungs prevents getting forward. In addition, we find, that in this animal even the arteries in some places participate in the tendency to dilatibility and tortuosity, so remarkable in veins. The *intercostals*, and other small arteries along the back and neck, take on, as shown in this beautiful preparation, a striking and unique plexiform arrangement, a fact first noticed by Tyson and Hunter. I have examined with care the blood-vessels inside the cranium, and have not observed that either the sinuses or veins, connected with the brain, differ from those of terrestrial animals—a circumstance which deserves to be noticed, as it would seem to indicate, on the part of the Creator, a watchfulness in protecting the centre or source of life in the animal, from the injury which must accrue to it, were the blood to accumulate about the organ in inordinate quantity.”

“It will be seen by these preparations, that, in the seal, the dilated condition of the veins is even more remarkable than in the porpoise. Those in the spinal canal are of extraordinary dimensions: the posterior and lateral parts of the neck, and also the back are covered with a network of veins

which, when injected, cover over and hide from the view every other texture. An arrangement such as this is not found in any terrestrial animal; and, as far as I know, has never been described by any author. The liver is, as it might be expressed, scooped out into one vast reservoir: the hepatic veins forming bags rather than vessels capable in themselves of holding nearly all the blood of the body. In this preparation, the contrast between the vena porta and hepatic artery, which are not one-third the size of the same vessels in the human body, and the enormous hepatic veins, whose diameter is greater than that of the right auricle of the heart in man, is singularly striking. The veins in the abdomen covering the lumbar muscles, and those on the surfaces of the kidneys are so capacious, that when filled with injection the parts beneath them cease to be visible."

"In the animals, before spoken of whose watery habitation is more extended and deep, and whose exercises, under water, in search of prey, or in evading enemies, are more prolonged, we find the provision of reservoirs more enlarged and more generally extended throughout the venous system of the body.

As we might be prepared to expect, a provision such as that which exists in the otter, is present also in diving birds, in accommodation to their habits of remaining under water in search of the fish on which they prey."

"To appreciate the necessity for a provision in diving animals, such as that, the exposition of which we have been engaged in, it is only necessary to bear in mind that such is the difference between the effects of the venous and arterial blood on the functions of the body, in warm-blooded animals, that it is essentially necessary they should be confined to their own respective vessels, and not mixed up with each other as has been supposed by some to occur in divers. The blood of the jugular vein, sent back directly to the brain by the carotid artery, (an experiment of the celebrated Bichat), caused instant death to the animal.

"The reservoirs then, which we have

seen to exist in the course of the veins leading to the lungs and heart in aquatic mammalia and birds, by allowing a temporary resting-place for the blood when stopped in its free course during the obstruction to respiration which occurs in the act of diving, are perfectly compatible with the established laws which regulate the movements of the fluids in living bodies, and absolutely necessary towards the existence of these animals under the circumstances in which they are placed."

An animated discussion followed, and was chiefly sustained by Mr. Hargrave, Professor Alison, Dr. Harrison, Mr. Adams, Dr. Hart, Dr. Jacob, Dr. Williams (London), and Dr. Corrigan.—For the remarks of these gentlemen we must refer to the Dublin Journal itself.

*Second day, Aug. 11th, Dr. PRICHARD
in the Chair.*

The motions and sounds of the heart occupied the whole of this sitting. A committee had been appointed to experiment on this subject, and having made their experiments and drawn up their report they presented them to the meeting. We cannot notice all, or many of the experiments performed by the committee, but only one or two to elucidate the inquiry.

EXPERIMENTS ON THE MOTIONS OF THE HEART.

"*Experiment 1.* A calf, two days old, having been secured on its back, and prepared as above described, the sternum and a portion of the ribs on both sides were removed, when the following motions were observed. The heart was beating strongly, at the rate of 144 pulsations in the minute, but in a short time fell to 80. While still enclosed in the pericardium, the heart was observed to have a slight libratory motion on its longitudinal axis, which motion, it may here be remarked, may assist in explaining the phenomenon of *frottement* in disease. On cutting open the pericardium, and turning it aside both the auricular appendices were seen to project with a rapid motion upwards, or towards the place of the sternum,

and immediately afterwards to recede. When coming forwards, they were swollen and soft to the touch; when receding they became hard to the touch, were diminished in size, and flattened. Immediately after the recession of the auricular appendices, the ventricles with a rapid motion assumed a somewhat globular form in their middle part, which projected towards their sternum, and their apex at the same time was pushed considerably in the same direction. During their continuance in this state, the ventricles were hard to the touch, and if grasped by the hand, at the commencement of the movement, they communicated a shock or impulse, and separated the fingers. When the ventricles had remained for a short time in the state just described, they suddenly sank downwards or towards the spine, and became elongated, broad and flat, and soft to the touch.

This succession of motions having been observed for some time a small glass tube was introduced through a puncture into the left auricular appendix, and the blood was seen to rise in the tube during the recession of the appendix, and to subside during its upward movement. A similar tube was introduced through a puncture in the right ventricle, and a jet of dark-coloured blood was thrown forth during the globular and hardened state of the ventricles, and subsided when they became flattened and soft. A puncture was made in the pulmonary artery, close to the ventricle from which it arises, and through it a stream of blood issued synchronously with the jet from the tube in the right ventricle. A tube having been introduced through a puncture in the left ventricle, and one of the mesenteric arteries having been exposed and opened, the jet from the ventricles was observed to precede the jet from the arteries, by an interval easily appreciable. The femoral artery was opened, and a similar observation was made as to the interval between the jet from the left ventricle and the jet from that artery. Previously to opening the chest, the committee had satisfied themselves, that the beat of the heart, felt through the sternum and cartilages of the ribs, preceded the pulse, felt in arte-

ries at different distances from the heart by intervals of time which were proportioned to those distances: and they were also satisfied, that the jets of blood from the mesenteric and femoral arteries were synchronous with the pulses felt in those arteries.

Experiment 2. In a calf, prepared as the former had been, and placed on its right side, a portion of the ribs on the left side was removed, the sternum and part of the cartilages on that side being left in their natural position, and the pericardium was opened. It was now seen that when the ventricles assumed their hardened state, their apex, and a considerable portion of their anterior surface were closely applied to the sternum, and when the hand was interposed between the latter and the surface of the ventricles, a strong compression was exercised on the fingers during each approach of the ventricles to the front of the chest. When the ventricles were in their softened state, their interior surface, by which is meant the one corresponding to that called anterior in the human heart, was sometimes in contact with the sternum, and sometimes removed to a little distance from it, and from the contemplation of this, and the preceding experiment, the committee were satisfied that the situation of the heart in the thorax is affected by the position of the body, as has been observed by others; for instance, that in the recumbent state, on the back, the heart recedes somewhat from the sternum: if the individual lie upon the face, the anterior surface of the ventricles is in constant apposition with the front of the chest, the pericardium of course being interposed. The yielding texture of the lungs, and the mode of attachment of the pericardium and the great vessels, are such, as to allow the gravitation of the heart to influence its position in different postures of the body. These experiments were repeated on different subjects, and the observations recorded above were confirmed."

For the experiments on the sounds of the heart we must refer to the *Dublin Journal*, contenting ourselves with the *conclusions* to which the committee came from the said experiments.

"From the experiments on the sounds of the heart, it appears to follow: 1. That the sounds are not produced by the contact of the ventricles with the sternum or ribs, but are caused by motions within the heart and its vessels. 2. That the sternum and front of the thorax, by their contact with the ventricles, increase the audibleness of the sounds. 3. That the first sound is connected with the ventricular systole, and coincides with it in duration. 4. That the cause of the first sound is one which begins and ends with the ventricular systole, and is in constant operation during the continuance of that systole. 5. That it does not depend on the closing of the auriculo-ventricular valves at the commencement of the systole, because such movement of the valves takes place only at the commencement of the systole, and is of much shorter duration than the systole. 6. That it is not produced by the friction of the internal surfaces of the ventricles against each other, as such friction cannot exist until the blood has been expelled from the ventricles, whereas the first sound commences with the beginning of the ventricular systole. 7. That it is produced either by the rapid passage of the blood over the irregular internal surfaces of the ventricles on its way towards the mouths of the arteries, or by the *bruit musculaire* of the ventricles, or probably by both these causes. 8. That the second sound coincides with the termination of the ventricular systole, and requires for its production the integrity of the semilunar valves of the aorta and pulmonary artery and seems to be caused by the sudden check given by the action of these valves to the motion of the columns of blood driven towards the heart after each ventricular systole by the elasticity of the arterial trunks.

The Committee wish, in concluding this report, to express their opinion, that although much light has been thrown on the subject of the Motions and Sounds of the Heart, by recent investigations, here and elsewhere, the nature of the inquiry is such as renders it difficult in many instances to arrive at satisfactory conclusions. They also

think that the subject, from its importance, whether in a practical view, or as an object of philosophical inquiry, is deserving of further investigation."

As might be expected, a long discussion ensued, in which Mr. Williams, of London, and Dr. Corrigan, of Dublin, were the most prominent orators. Dr. Corrigan candidly confessed that he was wrong in some of his first conclusions, and was convinced that his character would not suffer by this avowal. We are sure it will not; but, on the contrary, be raised by such honorable and honest procedure. The thanks of the meeting were voted unanimously to Dr. Williams.

Third Day. Dr. PRICHARD in the Chair

Dr. Mc'Donnell, of Belfast, read a paper this day on the action of the heart and pulse. Our author has some claim to antiquity, as well as to "priority, in such observations, having commenced as early as 1784"—that is, rather more than half a century back.

"He finds that in lying, sitting, or standing, there are three distinct numbers in the pulse, any one of which being given, the rest may be discovered by inference. This variation amounts generally to twelve, fourteen, or sixteen beats per minute, as its normal state, and therefore, that all observations of the number of the pulse, which have been made without reference to this principle, must be considered as nugatory, unless it be implied that the person was in the *horizontal position* when the observation was made. This rule for reducing the number of the pulse to a regular standard applies to health, but not precisely to disease; the effects of posture must be investigated separately in each disease.

The *differential pulse* appears to be confined to man. It is not observed in brutes, probably because from their form, their posture may be considered as always horizontal; but when placed erect this peculiarity appears also in them.

The variation, in the human species, is at its maximum in tall and feeble

subjects, particularly in convalescents from typhus: the minimum is generally found in children. These facts lead to the supposition, that this phenomenon is connected with some hydrostatic law, and not depending entirely on vitality. This, however, is merely thrown out as a conjecture, and requires further investigation. But in whatever manner it may be considered, it is plain that in all attempts to ascertain the effects of remedies, as well as of natural causes, due allowance must be made for these fixed differences produced by posture. What avails it to say that a medicine, or venesection, or heat, or cold, or a thousand other natural causes, raise or depress the pulse by four, six, or eight beats per minute, when the mere change of posture would raise or depress it twelve, fourteen, or sixteen per minute, and this merely in health, for in disease the differential pulse is often double this proportion.

In tracing the connexion between the pulse and respiration in man and quadrupeds, he finds that it ranges in health from four to six pulses for one respiration. This he considers a new and material fact; for if it be established by further observation, that this is a general law, we shall be able to infer the pulse from the respiration, and *vice versa*. This may be of advantage in enabling us to ascertain the number of the pulse in ferocious animals which we dare not touch, as well as in man during action or progression.

There is a coincidence between the number of pulses and steps in walking, at the common rate of progression in man, that is very remarkable and has not been hitherto noticed. His breathings are also singularly proportioned to his steps, so that it is easy to deduce these numbers from each other. But in hard labour or violent muscular exertion, as in running or ascending heights, the proportions are greatly altered. The same thing occurs in many forms of disease. There is reason to believe, that the carbonization of the respired air, has a great influence in all those cases where the number of respirations is greatly disturbed.

Dr. M'Donnell finds that the number

of respirations, and by inference the number of pulses, are much the same in passing over the same space, whether we run or walk, *i. e.* they depend as much upon the space traversed as on the time. Thus he finds, if he walks 1000 yards in ten minutes or in eight, or runs over it in five minutes, the number of breathings are nearly the same. It is to be observed, however, that this rule does not apply to small portions of space, such, as 50 or 100 yards. These facts, he thinks, are all complicated with carbonization and muscular motion, so as to require separate investigations.

In quadrupeds, especially when trotting or cantering, he has found that the steps, divided by the respirations, never give any fraction in the quotient, *i. e.* that these are universally proportional without any deviation. In man this does not occur, a circumstance which may arise from some peculiar anatomical or physical law in the connexion between the respiratory and muscular construction of these animals."

"While engaged in these enquiries, about thirty years since, he had found that the pulse in the arteries of the fœtus, before it breathed, was *slower* than in those of the mother. He had found also, that if the child, when born, remained for some time without breathing, the pulse continued slow during that interval, and became accelerated only at the instant it took in its first breath. This fact appearing to him new, he had investigated the circumstance in the cow, and finding the phenomena similar, he had communicated his observations to Dr. Clarke, Dr. Labatt, Dr. Stokes, and Dr. Douglas in Dublin, none of whom had ever noticed it in any other. Dr. Jefferay mentioned it in his lectures, and in his 'Observation on the Heart and on the Peculiarities of the Fœtus,' and thought it might hold true of quadrupeds, and of all warm-blooded animals. He thought it probable that the fœtus before respiration was in the condition of a cold-blooded animal, and partook of that slowness of the pulse which characterizes the tribe."

Dr. Collins observed that, from the experiments he had made on the subject, he had come to a very different conclusion. "He had invariably found the circulation of the fœtus much quicker than that of the mother." In this observation we concur. Why should the circulation be quicker in children than in adults, if it were slower in the fœtus than in the child. Perhaps the respiration may account for this difference.

Here the discussions turned on the interminable subject of the "sounds and motions of the heart," to which, we think, a great deal too much importance has been attached, considering the vast field of pathology and therapeutics which lies half cultivated. Mr. Carlile took an active part in this renewed discussion, which, however, was terminated rather abruptly at last by Dr. Collins, who rose, and stated that the discussion was becoming too protracted, as very many papers of importance were to be read before the Committee." Dr. Harrison then brought forward a paper on—

"CERTAIN BONES FOUND IN THE
HEARTS OF SOME OF THE RUMINANTIA."

After some general observations on the wisdom of the Divine Architect, as evinced in the construction of the various circulating organs—"all having a common type (though varied *ad infinitum*) and bearing the impress of one common hand—so wonderfully contrived, in every part, that the most extraordinary ingenuity could not make in them a single improvement," Dr. H. observed:—

"Of all animal, the best specimens of these bones were to be found in the ox. It has been stated (said Dr. Harrison) by some, that they are not to be found in the young animal, but this is a mistake; here is the heart of a calf three weeks old, and you can perceive how rapidly the development of these bones is going on. Here is a cartilaginous mass in the situation of the larger bone, and you can see a nucleus of bone in the centre of it very plainly.

This shews clearly that those ossific deposits are not, as Carus thinks, accidental, but are the result of a natural process.

From the uniformity of the size and structure of these bones, and from the numerous dissections I have made, I am led to consider that they serve the following purposes. The heart of the ox is very peculiar in its structure: its cavities are very small, its muscular parietes very thick, and of enormous power. Now, the muscular structure, if examined, will be found to stop short at the tendinous insertions of the aorta, and, consequently, it leaves that portion of the vessel which corresponds to the semilunar valves in a weak and unprotected state. I conceive, therefore, that one of the purposes which these bones serve, is to strengthen the roots of the great vessels in these situations, and defend the opening of the aorta from the effects of violent contraction. In the second place, this bone (the larger one) affords a degree of protection to the auricle, which has a larger cavity, but is not so strong as the ventricle; and in addition to this, affords a fixed point for the contraction of the muscular fibres during the auricular systole. It may also serve to prevent that cavity from being completely closed. Thirdly, it gives strength and attachment to the mitral valve, which is fixed to its upper border. Again, when we consider the size and calibre of the aorta in the ox, and the extraordinary thickness and elasticity of its parietes, we shall readily see the necessity of having some provision to support the pressure caused by the returning columns of blood. Accordingly, when we examine the aortic sinuses we find, that of two of them, the floors are formed by these bones, in addition to the ordinary structure. The third sinus of the aorta, which is deprived of this protection, is defended by a peculiar provision, consisting of a remarkably fatty deposit of a hard and firm nature, and which is found in the youngest animals, even in those which are very lean. The sinuses of the pulmonary artery are also defended by this fatty substance; in fact, it appears to be their principal

protection, for when dissected off, the walls appear so weak, as to be scarcely capable of bearing the impetus of the returning blood. The semilunar valves in the calf and ox are also very beautiful, and the corpora Aurantii, highly developed so as to afford good grounds to think, that they are intended chiefly for the support of the valves along their free margin."

Dr. Harrison exhibited some beautiful specimens of these bones. No discussion followed.

HYDATIDS IN THE OMENTUM OF THE AXIS DEER. Dr. HOUSTON.

Our Dublin contemporary considers this paper so valuable, and the drawings so important, that he has reserved it for his next number, giving, at present a mere outline of the paper.

"The paper contains a description of several hydatids, but more especially the *cysticercus tenuicollis*, of which a great number of large size, were found in the omentum of an axis deer, which died in the Zoological Gardens, at Dublin. The principal object of the paper is to determine the pathological changes, which hydatids and other parasitical animals undergo, and their relation to malignant or tubercular diseases. The degeneration of hydatids through all their changes is described, and the phenomena of degeneration are traced by Dr. Houston to a different source and termination, from that supposed by other authors to belong to them. The following extract from the paper, will give some idea of Dr. Houston's views on the subject. 'With respect to the question, whether the disease in the cyst proceeds and becomes the cause of death in the hydatid, or that the animal after passing into the state of death, and thence acting as a source of irritation on the investing membrane, gives rise to those changes in that texture which have been just described, it is very probable that the latter view of the case is the correct one: viz. that the worm having arrived at a certain age dies; that it then comes to act as a foreign body; and that all the subsequent changes which take place in the cyst are merely the consequences

which flow therefrom. The numerous and singular differences in the condition of the hydatid tumours, from that state in which they exist as translucid and living bodies, to that in which they appear in the form of small bone-like particles would seem to indicate, that a long period had elapsed since the development of the first series of hydatids in the omentum, and that these having passed away, were succeeded by others, which, in their turn, gave place to ternary and quaternary formations, each equally subject to decay, and running by the same processes into the same ultimate states of degeneration. In fact, the animals might be said to have established, in the omentum, a sort of colony—propagating their young, passing through '*les quatre âges de la vie*,' and finally converting their habitations into sephulchres, where their bodies passed into complete decay, without farther damage to the surrounding parts. There is most probably with these, as with all animated beings, a limit to the term of their existence; a period beyond which they are fated not to retain the condition of vitality.'"

ENTOZOA IN HUMAN MUSCLES.

Dr. HARRISON.

Dr. H. exhibited an enlarged view of a human biceps muscle, the body of which was dotted over with white oval specks, which on examination by the microscope, were found to consist of a semi-transparent cyst, of elliptic form, in the interior of which lies, coiled up, a minute worm. These worms have been frequently observed to move about after being dislodged from their cysts. They are of a pyriform shape, and seem to have a transverse opening at their larger extremity. Dr. H. never found these worms in any of the involuntary muscles. They occur chiefly in the muscles of the back and loins. The subjects in which they were found, were all scrofulous and emaciated. Dr. Roe, of Cavan, stated the following curious case, though it did not seem to bear very particularly on the subject of Dr. Harrison's paper."

"He was called some time back to

visit the daughter of a farmer residing at Drum, in the county Cavan; the girl had been attacked several days previously with inflammation of the thigh, and at the time of his arrival was labouring under severe symptomatic fever with delirium. The thigh was tense, red, and shining, enlarged to nearly twice its natural size, and extremely painful. No cause could be assigned for the disease, and he was informed, that until the occurrence of the present attack, she had always enjoyed excellent health. Having ascertained the existence of a collection of matter under the fascia, he made an incision, and evacuated a bowl-full of pus, mixed with what he considered to be clots of blood. His attention was not directed to the contents of the abscess at that time, besides the room was dark, and he was anxious to give vent to the pus as quickly as possible, as the patient was extremely restless. On emptying the matter from the bowl on a clean flag outside the door, the girl's mother was surprised to find among it a leech coiled up, quite alive and moving actively. She immediately brought the leech to me and it continued to live for several days afterwards. On inquiring minutely into the history of the case, I found that some days before she first complained of the limb she had been gathering water-cresses in a ditch and had felt hurt in or about the ankle of the inflamed limb, but did not pay much attention to it at the time. On examining the ankle I found a triangular cicatrix such as that which might be produced by a leech-bite. This fact would seem to prove that such animals can enter, burrow in, and preserve their vitality in the soft parts of the human body."

Mr. Crampton mentioned that several of the deer in the Phoenix Park had manifested symptoms of delirium, and were obliged to be shot. On dissection the tracheæ were found filled with worms. They were pendulous, and attached by the head, which resembled that of a leech. The brain was examined, but no disease found there. After some desultory conversation, the meeting broke up.

Fourth Day Dr. PRICHARD in the Chair.

Dr. Roupel this day detailed some experiments on poisons, and exhibited drawings illustrating the effects of these on various structures. Our readers are aware that in vol. 20, page 62, &c. we gave an account of Dr. R's. work on poisons. We deem it not necessary, therefore, to dwell farther on the subject in this place.

DR. ALISON ON THE VITAL PROPERTIES OF ARTERIES LEADING TO INFLAMED PARTS.

It appears that the distinguished Professor of Edinburgh has been engaged for some time past, in endeavouring to form an estimate of the "physiological principle of spontaneity of movement in animal *bodies*"; in other words, of the movements which occur in these bodies, independent of their living solids." There appears some mystification in this passage. By animal *bodies* we apprehend that the Professor means *fluids*; for of spontaneous movements in muscles, for example, there can be no doubt.

"Two branches of this inquiry are particularly deserving of attention. 1st. Whether the phenomena of inflammation can be explained on the supposition that the only vital principle is the action of the heart and vessels. 2ndly. If the movements of the blood through the lung can be explained on this principle. Dr. Alison thought these questions must be answered in the negative.

The first series of experiments made by Dr. Alison went to prove that the vital power of tonic contraction (to which Dr. Parry has given the name of tonicity, and which determines the degree of contraction in arteries after death) becomes diminished in arteries going to inflamed parts. Dr. Alison here detailed an hydraulic experiment which was made on axillary arteries of a horse, the one leading to sound, the other to inflamed parts, by means of two tubes furnished with stop-cocks; the rise of the water in one of the tubes being the

measure of the distention of the artery. By these it was found that the re-action of a sound artery raised the level of the fluid sixteen lines, while that of the diseased artery raised it only ten lines: thus proving that the sound artery was capable of greater distention than the diseased. As this experiment might be objected to as being performed ten hours after the animal's death, the axillary arteries of another horse were experimented on half an hour after the animal died. The subject of the experiment had laboured under violent inflammation of the knee joint, for which blood had been copiously extracted. On measuring the arteries of the diseased and sound limb, those of the latter were found much larger. The diseased arteries were also found to become enlarged as they approached the inflamed part. A portion of artery which was examined, measured 7-8ths of an inch at its upper or smaller extremity, and 12-8ths at its lower. In this experiment the artery of the sound limb expelled 13-4 inches of water, while the artery of the inflamed limb expelled only 11-2. In another experiment made by Dr. Spittal, the greater dilating power of the sound artery was also observed; the difference between the contracted and dilated state of the sound artery being 8-24ths, of the diseased artery 6-24ths.

From these experiments it results, that the arteries leading to inflamed parts become relaxed and weakened, transmitting the impressions given by the heart with less modification, and having less power of contracting on the blood. This being established, the question is, whether this state of the arteries is an adequate cause for the phenomena of inflammation, that is, whether inflammation consists in this condition of the vessels? He thought this question required further investigation. Two changes occurred in all cases of inflammation, a retarded movement of the blood in the vessels of the part, and an increased movement in the surrounding vessels. If we suppose that inflammation consists in an altered action of the vessels of the inflamed part, we make no attempt to explain the

difference between inflammation and simple congestion. This subject requires a vast number of experiments for its elucidation."

There is surely not much novelty in this doctrine. Every one knew that the vessels leading to inflamed parts were dilated—and it is nearly half a century ago that numerous experiments were made in Edinburgh (Lubbock, Allen, Wilson), to prove that the capillaries were weakened and dilated in inflammation—and consequently that the circulation was actually slower in inflamed than in sound parts. We have always considered this as the true doctrine of inflammation, and we are glad to see so able an advocate of the same in the person of Professor Alison. The doctrine of "increased action," in inflamed parts, is apparently supported by the utility of local evacuations from the vessels of the part. But it is to be recollected that vascular distention produces *irritation* in the nerves and muscular fibres of the portion inflamed, and that the removal of this distention by detraction of blood takes off the source of irritation and pain.

"The next part of Dr. Alison's paper contained some notices on the cause of death in cases of asphyxia.* He commenced by stating that it was well known that the admission of air into the lungs was absolutely necessary for the prolongation of life; that when air was excluded the power of the heart became inadequate to the transmission of the blood, which, under such circumstances, could no longer pass through the lungs. The question then was, in what manner respiration exercised this auxiliary power? He referred to the doctrines of Haller, Bichat, Goodwin, and others, and stated that the theories of the two latter being found erroneous, the doctrine of Haller had been again revived. The best mode of bringing this doctrine to the test was, to shew what occurs in an animal breathing a gas which contains no oxygen; where the mechanical change is

* We can only afford space for a short extract containing Dr. A's. conclusion.

going on, but the chemical is suspended. He, therefore, thought, that on confining an animal in azote until its breathing became laboured, and then taking it out and killing it immediately, he might have an opportunity of ascertaining whether the blood passes through the lungs, as in a case where the chemical change is going on. A rabbit having been confined in azote, was taken out, and its sensibility destroyed instantaneously by a blow on the head. It never appeared to inspire after the blow was struck, but was slightly convulsed. On opening the chest, Dr. Alison was surprized to find that the contractions of the heart were extremely feeble. The right side of the heart was distended with blood, and the quantity of blood, procured by puncturing the pulmonary artery, was ten times as much as could be got from the left side of the heart. In the right side of the heart there was a faint pulsation, which continued for a short time; the left side appeared to be quite motionless. From this experiment, it would appear, that if oxygen is not inspired, and if the chemical change in the blood is suspended, obstruction to the circulation through the lung takes place and asphyxia results, although at the same time the mechanical action of the organ may continue. In what way then are we to suppose that the inspired air acts on the circulation? If we suppose it to act as a stimulus on the capillaries of the lung, the theory is open to objection, inasmuch as it has not been proved that these vessels are capable of contraction. On the other hand, we cannot suppose that the air acts on the vessels of the lung as a sedative. The only conclusion we can come to, in the present state of our knowledge, is, that atmospheric air, applied to the blood in the lungs, promotes its passage through these organs in a manner wholly inexplicable. The motion of the blood through the lungs appears to be determined by a cause independent of any impulse from the containing solids. This view of the question appears to be borne out by what is observed in vegetables and the lower tribes of animals, in which the fluids move without any

contraction on the part of their containing solids, and seems to be confirmed by the vibratory motions of the ciliæ, as observed by Purkinje, motions which Dr. A. seems inclined to attribute to *spontaneous currents in the fluid itself.*"

Harvey (we believe) and others maintained, that the blood itself had a power of locomotion; so that even here, there is no novelty in the professor's notions. But we confess that we are not converts to this doctrine, however highly supported. We are more inclined to think that fluids move by some impulse unknown to us, than that they move *spontaneously*. We think it is very far from being proved that the sap ascends in vegetables, without any *propelling* or *attracting* power, independently of its own spontaneous disposition. It is not unreasonable to suppose that the varying states of earth and air, in respect to heat, moisture, weight, &c. may have a considerable influence on those vessels through which the sap moves. In respect to the vital fluids of the human body, we cannot bring ourselves to believe them possessed of voluntary power of locomotion. If the absorbents have the power of *selecting* the matters which they take up, may they not have the power of attracting and moving them? If water ascends in a capillary tube of glass, that affords no proof of spontaneous power of ascent in the water. Why does not water ascend when the tube is *not* capillary? This proves that the size of the tube has more to do with the ascent of the water, than any inherent power of locomotion in the water itself.

Dr. Granville, Dr. Clendinning, Dr. Harrison, Dr. Graves, and others, took part in the debate; but nothing particular was elicited.

ON PARTIAL AMPUTATION OF THE FOOT. By Mr. WHATTON, of Manchester.

The reading of this paper appears to have excited great attention in the section. We suppose that but a very brief abstract of it is given.

"Mr. Whatton said, that as far back as 1811, during the Peninsular war

his attention had been drawn to this subject. At that time, when the bones and soft parts of the foot were injured by balls or fragments of shells, the usual practice was to amputate transversely, either at the tarso-metatarsal union, or higher up at the astragulo-scapoid and calcaneo-cuboideal.— Since he had been appointed to the infirmary at Manchester, he adopted a different mode of operating, which was attended with very superior advantages. He had adopted this plan after a careful study of the relative anatomy of the foot, and was not aware that there was any such operation on record. He tried the operation in a great number of cases, and found it to answer extremely well; of this he hoped he should be able to convince the meeting, as he had an opportunity of showing a patient on whom the operation had been performed, and who was able to walk twenty miles a day.

Mr. Whatton then took a review of the history of partial amputations of the foot from the time of Garengot down to the present day. The operation of removing a part of the foot had been practised by many before him. The operation then fell into disuse, and continued so until 1789, when it was taken up with some modifications by Chopart, and afterwards further modified by Dupuytren and Richerand. In 1814 this operation became generally known in London, by the publication of M. Roux's work. A method of partial amputation of the foot had been proposed in England as early as 1758, by Mr. Sharp, a similar one by B. Bell, at Edinburgh, in 1778, and the subject had been also noticed by Mr. Hey of Leeds. In 1815 Lisfranc revived Garengot's operation. To all these different modes of operating one common objection holds, the arch of the foot is destroyed, the patient has no support except what he derives from the heel, and the limb is in fact very little better than a wooden leg. Where the flap is taken from the sole, there is a constant risk of sloughing; and the division of the plantar vessels frequently leaves the flap without a sufficient supply of blood to maintain its vitality. The power of

the muscles of the calf is constantly drawing the os calcis upwards and backwards; while the antagonism of the muscles is destroyed by the division of the extensor tendons. In the operation which he (Mr. W.) was about to propose, all these inconveniences were avoided; the spring of the foot is preserved, and if the patient be provided with a proper shoe, scarcely any deformity can be observed.

To illustrate this operation, Mr. Whatton read the details of the two following cases.—The subject of the first case, a man about thirty years of age, was admitted at the Manchester Infirmary, on the 25th of November, 1833. Twelve years before he had got a swelling of the foot, which was followed by necrosis of the internal and external metatarsal bones. Several fistulous ulcers had formed on the dorsum of the foot, and a probe, introduced into one of these, passed under the integuments, to the extent of four inches, upwards and downwards. He had quick pulse, emaciation, night sweats, and hectic.

Finding that all ordinary modes of treatment had proved ineffectual, Mr. Whatton decided on the longitudinal operation, which was performed in the following manner. An incision, commencing at the root of the fourth toe, was carried, in a slightly curved direction, towards the extremity of the fifth metatarsal bone, and terminated near the outer malleolus. This incision was made on the plantar surface of the foot. A similar incision, commencing, and terminating at the same points, was carried along the dorsum. The flaps being dissected off, the knife was carried between the two outer metatarsal bones, down to the cuboid. The outer edge of the os calcis, being found diseased, was also pared off with the scalpel. The second incision removed the next toe and its metatarsal bone in a similar manner, leaving three toes with their corresponding tarsal bones. There was considerable hæmorrhage after the operation, and it was thought advisable to defer dressing the foot, until the patient was placed in bed. The wounds healed kindly, and the man was discharged

about twelve weeks after the operation, perfectly well. A cast of the foot was taken ten months after the operation; this shews some fulness about the integuments of the tarsus and metatarsus, but in a cast taken twenty months after the operation, a manifest improvement is visible.

Mr. Whatton here exhibited the casts, which he stated he should feel great pleasure in presenting to the Royal College of Surgeons of Dublin. The patient operated on was exhibited to the meeting.—He walked up and down, with as much ease as a person who had the perfect use of his limbs; and on being required to stand on the leg, singly, he made the attempt in such a manner as to shew that he possessed a considerable power of balancing himself. Much approbation was manifested by the meeting on the occasion.

The next case was that of a female, who had two fungous ulcers of the dorsum of the foot; attended with caries of the heads and shafts of two of the cuneiform bones. There was a constant discharge of fetid, ill-conditioned pus; the patient got no sleep, and suffered very much from pain of the foot. The first incision commenced at the scaphoid bone, and was continued down to the root of the second toe. The second incision, commencing at the same point, ran along the edge of the second metatarsal bone, including the whole of the diseased part. The knife was next passed between the second and third toes, and the metatarsal bones being pressed down, the ligaments were divided. The scaphoid bone, being found diseased, was also removed. The hæmorrhage was easily restrained, and only two ligatures were necessary. The wound healed tolerably well, and the woman was made an out-patient, about two months after the operation.

Mr. Whatton stated, that it was his intention to follow up the subject, and bring it again before the section. He observed that an accurate knowledge of the anatomy of the foot was essential for the proper performance of the operation. He submitted his communication with diffidence, and threw himself upon the kindness of the meeting."

Much approbation followed the reading of this paper, in which Dr. Granville, Mr. Carinichael, Dr. Jacob, Mr. Jefferay, and others, heartily joined. The thanks of the meeting were unanimously voted to Mr. Whatton.

DR. STOKES ON THE DIAGNOSIS OF SOME DISEASES OF THE THORAX, IN WHICH THERE IS AN ACCUMULATION OF THE PRODUCT OF DISEASE WITHIN THAT CAVITY.

Most of our readers are aware that he had previously published two communications in the London Medical and Surgical Journal, on the subject of this paper.

"Without entering on the question, as to whether organic diseases of the thoracic viscera are followed in all cases by some alteration in the volume of these organs, we may divide cases of thoracic disease into two classes; first, those in which there is no manifest alteration; and secondly, those in which there is a manifest alteration of volume. This division, however, is merely arbitrary. These enlargements are of two kinds; either an actual increase of volume of the parenchyma of the lungs, or a distention of its serous covering. The affections in which these occur, may be termed diseases of accumulation. Another, and more important division, is that founded on the effect of disease, in increasing or diminishing the quantity of air within the thorax. If we take empyema on the one hand, and dilatation of the air-cells and pneumothorax on the other, we find that these diseases of accumulation may occur with a diminution or an increase in the quantity of contained air, so that the diagnosis depends, first, on the evidence of accumulation, and next on the physical properties of the accumulated matter. In empyema, there is accumulation and pressure from a non-elastic fluid; in emphysema and pneumothorax, from an elastic medium. In empyema we have, in addition to signs of displacement, proofs of a diminution in the quantity of contained air; in the other affections, we have also displacement, but the quantity of air is increased,

There are, however, some very interesting points of difference, connected with the results of these diseases on the walls of the thorax. In empyema, the dilatation is most remarkable in the inferior portion of the lung; in emphysema, in the superior. A still more remarkable difference appears to be connected with the effect of these two diseases on the muscular parietes of the chest. In empyema, the muscular parietes of the chest yield, in a very obvious manner, to the effects of the disease; the intercostal spaces are obliterated, the affected side enlarged, and the diaphragm depressed. But in emphysema, the disease may be carried to a great amount without producing these appearances. Now what is the cause of these remarkable differences? To explain this, was the object of the present communication.

It would appear that the explanation of the dilated state of the intercostal muscles was to be sought for in the circumstances attendant on pleuritic inflammation. It is a well-established fact, that when muscular structures are in close connexion with inflamed tissues, their functions become impaired; and in such cases we observe, first an increase, and afterwards a diminution of innervation. In the first place, we have pain, spasm, and irritation; in the second, weakness and paralysis more or less complete. Under the latter condition, the muscular fibres lose their contractility. Dr. Stokes here referred to the researches of Dr. Abercrombie on *Ileus*, in which the morbid appearances were found to be confined to the dilated and not to the contracted parts. With respect to the evidences in favour of the opinion, that the displacement of the thoracic muscles was the result of paralysis, he stated, that in the first stage of pleuritis we have pain on inspiration, without protrusion of the intercostal spaces; but in the more advanced periods, pain is absent and respiration more free, but the intercostal spaces yield, and we have smoothness of the side produced. The latter circumstances corresponds with the minus degree of innervation, or paralysis. The next evidence is, that mere pressure is not

sufficient to produce this. If we examine emphysema or hydrothorax, we shall find that in both there is strong pressure exercised on the muscular parietes of the thorax, as shewn by the enlargement of the chest; yet the intercostal spaces are not necessarily dilated. The last point of evidence is the sudden yielding of the diaphragm, which Dr. Stokes had observed in certain cases of empyema. This yielding was as extensive as it was sudden, and was not accompanied by evidences of increase of effusion. He thought, therefore, that he was borne out in the conclusion, that the protrusion of the intercostal spaces and the depression of the diaphragm are the result of a semi-paralysed state of these organs.

The principle (if established by future investigations) might be applied to the investigation of other forms of thoracic disease. Of pleuritis he had already spoken; it would be necessary to make a few observations with respect to bronchitis and pericarditis. In all these the suffering of the muscular tissue in the first stage has been recognized, but the effects of inflammation in the advanced condition had been neglected. In bronchitis it is a question how far the paralysis of the circular fibres of the bronchial tubes may account for the accumulation in those tubes which is so commonly followed by asphyxia, in cases of bad catarrhal fever. In such cases we often see the patients dying from the effects of the accumulation in the lung, although there is no remarkable general prostration, and the individuals possess a considerable degree of muscular strength, so far as the system of animal life is concerned. Again, it might be inquired, how far, in dilatation of the bronchial tubes, this condition may have existed. All writers seem to have acknowledged that Laenec's explanation of this occurrence is imperfect and unsatisfactory. Lastly, in cases of pericarditis, this principle (if admitted) would serve to explain the fatal termination of the disease. How accurately do the symptoms of the advanced stage of pericarditis, the syncope, the weakness, the failure of the pulse, correspond with a

more or less paralyzed condition of the heart? How singularly do the phenomena of the first stage correspond with the increase of innervation which we know to be the first effect of inflammation of the muscular structure? The same principle would serve to explain the supervention of active aneurism on the advanced stages of pericarditis. In the weakened state of the heart it yields to the pressure of the blood, and by degrees its cavities become distended. On the hydrostatic principle the force of this distention must be every moment increasing, and, of course, the progress of the disease will be proportionally rapid. Now suppose that the inflammatory process ceases; the muscular fibres of the heart recover their tone, but they have an increased duty to perform; and from the well-known law in physiology their growth is increased. To dilatation is added hypertrophy, and thus active aneurism is established. This theory differed from that of Andral, who assumes that the hypertrophy takes place from the first, and omits the possibility of an intervening paralytic condition of the heart.

The last point to which Dr. Stokes referred related to the phenomena of respiration in Laennec's emphysema. If we take two cases of disease of accumulation, as for instance empyema and dilatation of the air-cells, and suppose that in one the chest yields *pari passu* with the enlargement of the lung, while in the other it is rigid and unyielding; it is plain that the physical conditions and signs must be different. This appears to afford an explanation of the feebleness of respiration in dilatation of the air cells. If the quantity of air in the lung be so great as to keep it forcibly distended even after expiration, it is obvious that on the next inspiratory effort, the volume of air which enters will be minus the expansion of the lung from its distending force. If this be true, and this cause be the principal source of the feebleness of respiration, it should follow, that if the chest yielded easily to the enlargement of the lung, the disease would occur without the characteristic sign; in other words, the feebleness of respi-

ration would be more a measure of the compression of the lung than a direct sign of Laennec's emphysema. Dr. Stokes brought forward an illustrative case, and concluded by stating, that these observations and suggestions should be tested by future investigation."

We are much surprised to find that this important communication led to no discussion. Our experience in medical meetings, however, might have prepared us for this; for we have often seen the best communications pass *sub silentio*, while papers, not worth a farthing intrinsically, have brought forth discussions of the most valuable nature. We think we could account for this seeming anomaly; but we have neither time nor space for speculations at present.

ON THE TREATMENT OF PURULENT
OPHTHALMIA IN NEW-BORN INFANTS.
By Dr. EVORY KENNEDY.

"Dr. Kennedy said that he wished it to be understood by the meeting, that the object of his communication was merely to illustrate some disputed points in practice; on such a subject nothing new or original was to be expected. Purulent ophthalmia was of very frequent occurrence; many cases of it were to be met with in lying-in-hospitals; it was a disease of a violent character, and perhaps caused more blindness than any other affection of the eye. He did not intend to enter into the history of the disease, nor would he stop to examine the question as to its phlegmonous or erysipelatous nature. A great deal of difficulty attended the investigation of the origin of purulent ophthalmia, as connected with a specific virus. As far as his experience went, the proportion of cases which could be distinctly referred to gonorrhœa, or to the leucorrhœal discharge, was very small. He had, however, observed that ophthalmia, generated in this way, was of a bad and obstinate character; five of the worst cases he had seen had been produced by infection, and in one of these there was extensive sloughing of the cornea. The disease was observed in the lying-in-hospital

to commence either immediately after birth, or in a few days afterwards. It was also seen to follow exposure to cold and irritants, a circumstance which goes to prove, that irritation, whether specific or not, may produce it. Viewed without reference to any theory, the disease seemed to consist in a violent and rapid inflammation, speedily followed by a copious secretion from the diseased part. A very remarkable change took place in the secretion of the conjunctiva; this, however, was not peculiar to that membrane; an analogous change was frequently observed in certain affections of the mucous membrane of the genito-urinary and respiratory systems.

With respect to the treatment of purulent ophthalmia in children much difference prevailed. Some treated it with sedatives, others with stimulants; a third class restricted the use of sedatives to the early stage of the disease, and then had recourse to stimulants and astringents. He would proceed to state those means which he had found most efficient. One of the first and most necessary steps in the treatment was the application of leeches. One of these was applied to the inflamed lid, or to the temple in the immediate vicinity of the eye; the former situation was, however, generally preferred. Dr. Kennedy had never seen any inconvenient or alarming hæmorrhage from the use of leeches under such circumstances, and conceived that the extravasation of blood in the loose cellular tissue of the lids might, by its pressure, have some effect in preventing the hæmorrhage. In bad cases, where the inflammatory symptoms ran high with copious purulent discharge, and a tendency to eversion of the lids, the leech was applied a second or even a third time, or oftener. Leeching was not found necessary in all cases; in the milder ones, fomentations, alterative aperients, and the use of a solution of nitrate of silver, removed the disease in two or three days. With respect to leeching, he had to observe that he had never seen any of the bad effects attributed to it by some practitioners; in some of the cases which he had under

treatment, a leech had been applied four, five, or even six times to the same individual.

After leeching, the common practice is to have recourse to fomentations, aperients, and astringent collyria. Dr. Kennedy did not think this a mode sufficient; to treat the disease with effect, it was necessary to produce an altered action in the diseased parts.—For this purpose nitrate of silver seems to be better adapted than any other substance; he had tried it extensively, and could bear ample testimony to its value. He had always employed a strong solution, having found that under five grains to the ounce, it produces little or no effect. Solutions, varying in strength from ten to twenty grains, or even half a drachm to the ounce, were applied to the eye, three or four times a day, and succeeded in effecting a cure, where weaker ones had failed. In some cases, the solid nitrate of silver was applied all over the inside of the lids. This was followed by considerable pain, and a puffing of the lids, which continued some hours after the operation, but was easily removed by sponging the eyes with cold water. In obstinate cases, besides leeching and the nitrate of silver, alterative aperients were employed. Scarification of the lids was not resorted to in any case, and Dr. Kennedy thinks, that in the early stage it is objectionable. A close and constant attention to cleanliness was found to be of the greatest use, and he had observed that those nurses, who were careless in washing the eyes of the children after birth, had the greatest number of cases in their wards. The foregoing treatment proved ineffectual, where attention to cleanliness had been neglected. His attention was drawn to this circumstance by observing, that all the cases which were under one particular nurse recovered rapidly, and cases which had been going on badly with others, began to improve when placed under her care. On inquiring into the cause of this, he found that this woman kept the child almost constantly in her lap, and removed the discharge with a soft sponge, as fast as it formed. This was also noticed in the convalescent cases. Where the

children had been removed from the hospital, a slight discharge still continuing, they generally relapsed from neglect. The case of sloughing of the cornea was one of this description.

The success attending this practice was seen in the rapid subsidence of the disease. On the second or third day, the infant was able to open its eyes, and the worst cases yielded in ten days. Where the disease was protracted, owing to local or constitutional debility, the muriated tincture of iron was given in the breast milk, and occasionally the vinum opii was dropped into the eye."

Dr. Beatty having the charge of a similar institution, could confirm most of the above statements. In the great majority of instances he was unable to trace any specific virus. His experience differed from that of Dr. K. in respect to leeches. The cases did as well without local bleeding as with.

"His treatment consisted at first in the use of cold applications to the eye, constantly repeated, and the use of alterative aperients, and afterwards of the saturated solution of the subacetate of lead, as recommended by Dr. Jacob. If no improvement followed the use of the liquor plumbi, in two or three days, he then had recourse to the solution of nitrate of silver, of the strength of ten grains to the ounce or more. He had found the five-grain solution quite inefficient."

Mr. Byrne, on the other hand, said he had been able to trace every case to a specific infection. He had frequently applied the solid nitrate of silver to the conjunctiva, with great benefit. Swellings of the lids were easily removed by bread and water poultices.

Dr. Collins used leeches with benefit. The nitrate was also beneficial.

Dr. Ireland had seen the disease where there could not be the slightest suspicion of gonorrhœa. He never observed any bad consequences from leeches. He applied the leech to the conjunctiva lining the under lid. After the inflammation was reduced, he applied a solution of the nitrate—20 grains to the ounce of distilled water—

with benefit. The disease lasted longer in his hands, than in the hands of Dr. Kennedy or Dr. Beatty.

CASE OF SUCCESSFUL CÆSAREAN OPERATION. By G. B. KNOWLES, Lecturer at the Manchester School of Medicine.

"The patient after being delivered of her fourth child, received an injury, which was followed by pain of the hip-joint, and loss of power in the lower extremities. Since the commencement of this disease she had several miscarriages. In November last she was again seized with labour-pains, and on examination, it was found that the sacrum projected in such a manner as to feel like the head of the child, narrowing the lower outlet of the pelvis to two inches by one. The operation was performed thirty hours after the commencement of labour, and six after the rupture of the membranes. Though the incision was made over the placenta, very little blood was lost, and the patient bore the operation extremely well. With the exception of tympanitis, she had no bad symptom for the first two days; on the third she had vomiting and hiccup, which yielded to treatment, and the tympanitis was removed by the use of turpentine. Owing to the distention of the belly, the lips of the wound could not be brought into apposition until the fifth day; in the interval, a limpid fluid was discharged from the opening. The patient recovered in about a month."

DR. CORRIGAN ON THE BRUIT DE SOUFFLET.

"The sound to which bruit de soufflet has been given, is produced in various parts of the circulating apparatus. Its existence has been ascertained within a comparatively short period, and is due to the inquiring spirit of modern investigation. Few things are more interesting, as objects of pathological curiosity, than the production of sounds in the vessels of the human body under certain circumstances. The

nature of these sounds has been examined with all the attention which the subject deserves, and not only has their existence been determined, but it has been found that they constitute some of the most important signs of disease.

It is interesting to inquire, on what peculiar mechanism *bruit de soufflet* depends, as unless we are properly acquainted with the manner in which it is produced, we can never apportion to it its due importance, or estimate its proper value as an indication of morbid change. The first part of this communication I shall not read; it consists of an analysis of the various opinions of others, as to the mode in which this sound is formed. I shall merely state, that Laennec supposed it to arise from spasm; and to Dr. Williams, who has followed him in the same path of inquiry, we owe the suggestion that it might be found to arise from the operation of physical causes. Dismissing the examination of these and various other opinions, I shall proceed at once to the statement of my own views on the production of this sound, remarking *in limine*, that it is heard under a great variety of circumstances. We hear it in narrowing and in dilatations of the aorta, in narrowing of the ventricular opening from disease of the valves, and in permanent patency of the aorta, in varicose aneurisms, in aneurismal varix, in the vessels of the uterus during pregnancy, and even in vessels without any appreciable disease. For the production of *bruit de soufflet* the simultaneous presence of the two following conditions are necessary:—first, an irregular current-like motion of the blood (instead of its natural equable movement), tending to produce corresponding vibrations on the sides of the arteries or cavities through which it passes; and secondly, a state of the arteries or cavities themselves, by which, instead of being kept in a state of tense approximation on their contained inelastic blood (and which would necessarily prevent any vibration in their sides), they become free to vibrate from the play of the currents within on their parietes, and by these vibrations give to the sense of touch ‘*fremissement*,’

and to the sense of hearing ‘*bruit de soufflet*.”

If you press on the femoral artery below Poupart's ligament, so as to diminish the calibre of the vessel, you necessarily diminish the supply of blood to the artery below the point of pressure, while the outlet through its branches continues as before. You do not interfere with the action of the heart above or the artery below, you merely diminish the area of the vessel at the part where pressure is applied. Now if a finger be placed on the artery, a short distance below the point of pressure, a *fremissement* is felt, and if the stethoscope be applied over the same spot *bruit de soufflet* is heard. This sound is present in a very remarkable degree in narrowing of the auriculo-ventricular openings of the heart. In this disease the free edge of the valves is most commonly the seat of morbid action, it becomes thickened and drawn in, and thus narrows the opening. Now the ventricle after each contraction leaves its sides in a flaccid state, favourable for being acted on by the next gush of blood from the auricle into the ventricle. The consequence of this is, that the fluid, passing through the narrowed auriculo-ventricular opening, is, in obedience to a well-known law in hydraulics, thrown into diverging currents, and if the hand be applied to the chest, a *fremissement* may be felt, and a loud *bruit de soufflet* heard.

Having mentioned the occurrence of *bruit de soufflet* in the narrowed state of an artery, as also in narrowing of the auriculo-ventricular openings, I shall contrast with those a peculiar condition of the aorta, viz. permanent patency of its mouth, in which the sound is heard without any narrowing whatever. [Dr. Corrigan here exhibited drawings of the disease in question.] In some of these cases, the semilunar valves have perforations or holes in them; in others they are thickened and bound back to the sides of the aorta; in others they are ruptured. In some instances, however, the valves remain healthy, the mouth of the artery becoming dilated, so that they cannot close across its mouth; and in these

instances, how is this sound produced? It arises from the artery not admitting, in these conditions, of being kept in a sufficiently tense state, so that at the next rush of blood the blood sent in does not move equally, and this current-like motion of the blood playing on its sides produces in them corresponding vibrations, and the sound is heard.

I have noticed all these cases to shew under how many various and seemingly contradictory circumstances it may occur. During pregnancy it may be distinctly heard in the vessels of the uterus after the fourth or fifth month. If we examine the state of these vessels, we shall find that the conditions necessary for the production of *bruit de soufflet* are present. Their free anastomosis with veins and sinuses permits them to become partially flaccid in the intervals of the heart's contraction, their sides are thin, and the rush of blood into these comparatively flaccid tubes at the next contraction of the ventricle, gives rise to the current-like motion on which the sound depends. The existence of similar conditions will explain its occurrence in varicose aneurisms and aneurismal varix.

Having alluded to those cases in which it is heard in certain diseased conditions of the heart and arteries, I may notice those cases in which its occurrence is unconnected with vascular disease. If a patient be bled too much, or if an animal be dying from the effects of hæmorrhage, this sound is heard in the heart and great vessels. Here, in consequence of the quantity of blood which has been abstracted, the equilibrium of the circulation is destroyed, and the arteries not having a sufficient quantity to keep them in a tense state, *bruit de soufflet* is the consequence. We also meet with it occasionally in the healthy state of the heart, in nervous and irritable individuals. In this case the equilibrium of the circulation is destroyed by various causes of excitement, and the calibre of the vessels becomes disproportioned to the quantity of contained blood, so as to give rise to a certain degree of flaccidity of their walls. It is a well-

known observation, that this sound is never heard in plethora or inflammatory fever, for in these conditions of the system, there is not room for the vibrations of the arterial tunics.

Dr. Corrigan concluded, by detailing an experiment in proof of the foregoing theory.

A small bladder in one instance, and a length of gum-elastic tube or gut in another, were interposed between two cocks, the upper connected with a water cistern; the cock at the other or lower end being the discharging orifice of the bladder or gut. On allowing the water to flow through, the sound of *bruit de soufflet* and the sensation of *fremissement* were perceptible in the intervening bladder or tube until (from the upper pipe pouring in fluid faster than the lower discharged it) the bladder or gut became tense, and then both sensations ceased, the discharge of fluid from the lower pipe continuing all the time. This experiment was applied to explain the occasional presence or absence of *bruit de soufflet* in aneurisms; the sound being present in an aneurism, if the parietes can from any circumstance become at all flaccid in the interval of the heart's contraction, and being absent where the parietes are distended and tense."

The thanks of the meeting were voted to Dr. Corrigan by Mr. Crampton. Dr. Harty had observed *bruit de soufflet* in all the arteries where a polypus of the left ventricle of the heart existed. Dr. Williams observed that his views had not been stated quite correctly by Dr. Corrigan. He had attributed the *bruit de soufflet* to narrowing or obstruction of the vessels; but he did not deny that circumstances might modify the course of the blood, and have a share in producing it. He thought Dr. Corrigan's explanation would not apply to ossified aorta, in which the *bruit* is sometimes heard. But Dr. C. was able to defend his doctrine against all objections.

"In reply to Dr. Williams' observations he would say, that he was aware of the existence of the *bruit* in ossification of the aorta. In such cases, when the first current has been thrown

back, the next impinges on a portion of the tube most likely to be thrown into sonorous vibrations. This circumstance had been already noticed by Dr. Wm. Stokes, and he had remarked that where this intense musical sound occurs, you may guess fairly that the disease is ossification of the aorta."

A paper was then read by Dr. Perry, of Glasgow, on typhus; but no particulars are published. An ingenious curved drill catheter was shewn by Mr. L'Estrange when the meeting was adjourned.

Fifth Day, August 14th.

Dr. O'Beirne read an abstract of his views respecting "defæcation;" but, as we dedicated a long article to his work in a late Number of this Journal, we need not dwell on it here. We think it rather injudicious for authors to hash up published works on such occasions as the present. Dr. O'Beirne, like all *doctrinaires*, is more and more convinced, by every day's experience, of the justness of his views. He still maintains that the rectum is *not the receptacle for fæces*, and that the sigmoid flexure of the colon is never found in the left iliac fossa, except when distended by fæces. When empty, he maintains that it lies in the pelvis, "doubled over the rectum."

"From the results of his numerous experiments and pathological investigations, Dr. O'Beirne comes to the conclusion, first, that the ileo-cæcal valve permits the fæces to pass readily into the colon, but prevents their return into the small intestines; secondly, that the cæcum and colon, from their position and relations, must be always more or less distended with fæcal matter; thirdly, when these become so distended as not to be capable of receiving any more, the small intestines must become also distended; fourthly, that fæcal accumulations are never found in the rectum, except in cases of injury done to the nervous centres, followed by paralysis, and in very weak individuals of a sedentary habit.

RESEARCHES ON THE EFFECTS OF COLD AND CLIMATE WITH A MODE OF MEASURING THE DEGREE OF REFRIGERATION IN COOLING BODIES. By Dr. OSBORNE.

"It would be interesting (said Dr. Osborne,) to ascertain by a tabular view, the proportion of diseases produced by cold. To arrive at some information on this subject, I caused the patients in Sir Patrick Dun's Hospital to be examined some time ago, and found that out of fifty-seven cases of various forms of disease, thirty-four were attributed to cold. In these the cold was contracted in the following manner: twelve from damp clothing, five from wet feet, three from bathing, fourteen from exposure to cold currents of air while heated.

It is unnecessary for me to dwell on the importance attached to the investigation of the nature and effects of this powerful agent. The temperature of the human body, which may be estimated at 98° of Fahrenheit, is so equally and uniformly diffused, as to secure to all parts a nearly equal degree of warmth; and this has been further regulated by means of clothing so as to enable man to adapt himself to the diversity of climates and seasons. Thus the Esquimaux of North America, and the inhabitant of central Africa, are equally intent on maintaining an uniform degree of temperature. In defending the cutaneous surface from the injurious effects of cold, man had been eminently successful; but there is a very extensive surface which he cannot protect; he cannot prevent it from coming in contact with the vast expansion of mucous membrane in the lung. The expired air is always heated to near the temperature of blood, no matter how cold it might have been when it entered the lung; and if we reflect that a quantity of air, equal to about twenty-eight cubic feet, is required every hour for the purposes of respiration, we may be able to form some estimate of the vast quantity of heat which is subtracted from the system in this manner. As all warm bodies give out heat in proportion to their temperature, and

have a tendency to continue this process until the surrounding objects are raised to the same standard, it follows that the lung must, under ordinary circumstances, be constantly employed in adding to the temperature of the inspired air. This process, however, appears to go on with varying degrees of intensity, the air being more heated in the first than in the second step of the process, that is in inspiration more than in expiration, and that by the time it has got into the aircells it has acquired more than one-half its heat. What the source of this vast quantity of heat was, it was not easy to ascertain. That it was not dependent on respiration, was proved by the experiments of Sir B. Brodie, who had found, that although, by keeping up artificial respiration, the circulation went on, and the change of colour in the blood took place, still the body cooled down rapidly.

From these and other considerations it would appear that we have good grounds to look upon respiration as a cooling process, by which, in certain states of the atmosphere, a vast quantity of heat is abstracted from the system. This view of the question leads to many interesting considerations connected with disease. In the sinking energy which accompanies many forms of mucous disease, when the coldness of the surface and extremities shews that the power of generating heat is far below its natural standard, the effects of reduced temperature assume a very important character. The air then receiving very little heat in its passage, reaches the ultimate vessels of the lung in a low state of temperature, the consequence of which is torpor of the capillaries, which are thus rendered incapable of acting on the blood; and on examining the body after death, the right cavities of the heart are found to be gorged with blood. An unfavourable result of the same character may arise from the application of cold air to the surface of the lungs in low fevers, accompanied by coldness of the extremities and diminished vital energy. A knowledge of this principle may serve to explain the greater frequency of deaths by night under such circum-

stances; it also suggests the propriety of attending to the temperature of the apartments where sick persons are lying, in order to prevent the operation of a cause so likely to prove injurious.

In the healthy individual, the effect produced by the application of cold air to the surface of the lungs is slight, and chiefly limited to the rima glottidis and larynx. This occurs most frequently in passing suddenly from a heated apartment into cold damp air. When the air gets into the minute bronchial tubes, its effects are much less likely to prove injurious; it acquires such a quantity of heat during its transit, that its injurious properties are neutralized. It is a common opinion, that sleeping in damp apartments has a powerful tendency to produce cold. This, however, is found not to be the case, where the residents are careful in keeping their clothes dry. I was informed by a military medical officer, that by adopting a precaution of this kind, he had been able to preserve all his men from the effects of cold, at a time when they were quartered in a damp, newly-plastered barrack. Every individual in health raises the temperature of the bed in which he lies to 80° , and the only way in which cold can prove injurious, under such circumstances, is by being applied to the lung. I come now to consider the effects of cold on the stomach. This organ appears to possess but very little sensibility to cold or heat. We take tea at the temperature of 140° , and ice at the temperature of 32° , without the difference being perceived by the stomach. The impression does not seem to extend beyond the mouth and pharynx, and hence we frequently see persons who have taken very hot substances into the mouth, swallow them quickly to get rid of the sensation of heat. Cold seems to act on the stomach rather as a stimulant than a sedative. This is particularly observed with respect to ice. Many persons will feel thirsty, and drink in half an hour after taking an ice. In some instances the application of cold to the stomach proves highly irritant giving rise to extensive and violent inflammation; this may be observed in that form of gas-

tritis, which results from drinking cold water while fatigued after violent exercise. This, perhaps, may be explained by supposing that the overpowering influence of the cold produces, not reaction, but that torpor and distention of the vascular system, which perhaps, is the character of inflammation in the first stage.

Where cold is applied to the surface of the body we observe two different results. Where the application is transient, and the circulation active, cold is followed rapidly by temporary vascularity, with increased heat, and redness. When severe, and continued for a length of time, it produces a paleness and shrinking of the part, followed at first by lividity, and afterwards by tumefaction. Taking these facts in connexion with the dilated state and diminished tonicity of the vessels, as proved by Dr. Alison, does it not appear that cold produces its effects by superinducing torpor of the part, which if not removed by transient reaction, will be followed by the more permanent and vigorous reaction of inflammation?

The various contrivances adopted by mankind to protect themselves against the influence of cold, by clothing, habitation, and artificial heat, prove how much its abstraction affects our comforts. Men of science have explored with assiduity the effects of temperature on the thermometer and hygrometer, and have observed its varieties with great care; but it must be confessed, that hitherto meteorology has contributed little or nothing to our knowledge of the phenomena of health and disease. One consideration has been entirely omitted, and this refers to the cooling power of the atmosphere, as estimated not merely with reference to our senses. The human body is generally placed in a medium colder than itself. The degree of cooling power possessed by this medium has never been accurately measured, and is merely judged of by the sensation of the individual. I beg leave to introduce to the notice of the meeting a mode which I have employed for some time in measuring the degree of cooling power enjoyed by atmospheric air under various circumstances. The instrument which I

employ for this purpose consists of a spirit thermometer without a frame, carefully graduated from 80 to 90 degrees inclusive. Having heated this to 90 degrees, it is exposed to the cooling influence of the air in different places, the space of time which the spirit takes in cooling down from 90 to 80, being the measure of the refrigerating power of the air. From several experiments which I have made with this instrument, I find that the cooling power, is inversely as the time required to bring the spirit level from 90 to 80. The spirit thermometer is used in preference to one of mercury or water, because it is less rapid in its descent, and affords more time for observation. The numbers 80 and 90 are selected as including the ordinary range of temperature on the exterior of the body. The thermometer I use has a bulb of an inch in diameter, and a stem of six inches. The spirit is made to rise by heating the bulb with the hand or warm water. In order to insure accuracy, it will be necessary to have a number of these instruments (heated to 90) placed in air at the temperature of 60, and to select one of them which shall be found, on several trials to cool down to 80 in the same given space of time.

The following is a table of the results given by this instrument in different experiments. Heated to 90, and placed in the open air, at a temperature of sixty, the instrument cooled down from 90 to 80 in three minutes, when at rest; when exposed to a slight breeze, it cooled down in one minute forty-eight seconds. In a temperature of 62, it cooled down, at rest, in three minutes; when fanned with paper it cooled down in one minute and thirty second. In a temperature of 68 1-2, it cooled down, at rest, in four minutes; held by an individual walking briskly about, it cooled down in two minutes forty seconds. This shews that the rate of cooling in the same temperature, occurring in a person at rest, and in an individual exposed to a breeze, is in the proportion of five to one. Compare this with the fact recorded by Captain Parry; he found that in the Polar regions, the men could bear the air at a temperature of zero while at rest, but

could not when walking about. From the superior refrigerating power possessed by a breeze, it was very probable that if the persons who perished in the black-hole at Calcutta, had allowed one of their number to sit under the window, and fan the rest of the party, their lives would have been saved. The ordinary thermometer cannot measure this effect of the cooling power of air put in motion. In places along the sea coast, where the cooling power of the air was very great, it afforded no information; and yet in such places a very appreciable difference will be shewn by the instrument which I hold in my hand. These observations will apply with increased force to the western coast of Africa, and the West Indies. If you look to Thompson's meteorological tables, you cannot find any thing in them, capable of explaining the vast difference, in point of danger, between the temperature of the day and night. This instrument, I think, would enable us to give some explanation of the bad effects connected with these changes, which are totally inappreciable by the common thermometer."

DR. HUTTON ON CONGENITAL DEFECTS.

"Dr. Hutton read a long paper detailing a remarkable case of deficient development and malformation. We greatly regret that our limits will not permit us to give even the substance of this paper. Yet we cannot pass over this paper entirely unnoticed. The subject was an ideot, aged 31 years, who died in the Richmond Hospital of diffuse inflammation of the mucous and submucous membranes of the pharynx, larynx, &c. There was a remarkable deficiency in the right hemisphere of the brain, though the head presented no particular deformity externally. The brain, generally, was small, and the skull much thickened, particularly in the frontal region. A great part of the right hemisphere was deficient, and a serous cyst, filled with limpid fluid, five inches in length, and nearly three in its transverse diameter, occupied the hiatus. The brain was so soft from putrefactions, after the drawings had been taken, that no mi-

nute examination of it could be made.

Dr. Hutton said, that he (the deceased) seemed to have very few ideas, and those of the simplest kind, principally connected with his sensations. He apprehended some ideas readily, but could not give them utterance, had little use of language, and articulated indistinctly. He had strong local and personal attachments, was very fond of his nurse and attendants, and frequently asked leave to go and see them while in hospital. He was inoffensive in his manners, well conducted, and of a cheerful disposition. He was not indifferent to money, and asked for his penny like others. During his illness, he frequently cried out to his medical attendant, 'make me live, make me live;' and referred to the throat as the seat of his disease.

ON ANEURISM BY ANASTOMOSIS.

Mr. ADAMS.

This was an elaborate paper, and drawn up with great ability and evidence of practical observation of the subject. We regret that we are unable to give an account of it here. When published, we shall present an analysis to our readers.

The final adjournment being moved by Dr. Harrison, Dr. Alison rose, and said—

"Before the Section adjourns permit me, on the part of those who are about to return to their homes, to express their warm thanks, and a deep sense of gratitude for the unvarying kindness and hospitality we have experienced since our arrival. Sir, the hospitality of your city is well known, and the feelings of her inhabitants are as generous as they are enthusiastic; but I must say, in the utmost sincerity, that never have I been so kindly received, never so gratified and amused as on the present occasion. But, sir, there is another duty which we have to perform, another feeling which we are bound to express in terms no less vivid, in language of equal truth. We have to evince the high respect we do and always shall entertain for the talent, industry, and research, with which every branch of the profession is here conducted, and the great ability and spirit

with which the science of medicine is here cultivated."

Dr. Clendinning bore testimony to the truth of Dr. Alison's sentiments, and Dr. Graves addressed the Section on its approaching dissolution.

"I need not in such an assembly say, that I feel deeply gratified in having the honour to second that motion. Gentlemen, before we part and while those feelings of mutual esteem and good will, those aspirations for the interests of medical science, in which we have all partaken, are still fresh and vivid, permit me to offer one word of advice. Do not omit attending every meeting of the Association. If the profession were to send its deputies in greater numbers to these meetings, such an union of talent and information would be likely to impress the nation at large with the importance of the medical profession to mankind. Without entertaining the slightest feeling of jealousy, I will assert, that among all the sections there is none more important, none more useful than that which embraces the distinguished individuals which I now see assembled before me. I will state candidly, that I think the medical profession has not had its due weight in the British Association. But when I say this, let me not be misunderstood, I merely wish to stimulate the medical section to increased activity, I merely wish to excite the profession at large, to co-operate with more zeal in promoting the objects for which the British Association was formed, by attending each meeting in greater numbers, and by bringing to the common store a more abundant contribution of important facts, and well founded conclusions. To promote the attainment of so desirable an end, let Dublin, Edinburgh, and London, let the chief towns of all Britain vie with each other in the number and ability of the deputies they send to the medical section, at the next meeting of the Association."

We regret to find so few of our metropolitan brethren at the Dublin Meeting. There is some excuse, however, in the distance, and in the protracted session of Parliament, which kept London full, to the beginning of September, and even to the middle of

that month. This was the cause of our own absence, and that of many others. It shall not operate next year, when we anticipate an overflowing concourse at Bristol, where, we understand, the greatest accommodations have been offered by the corporate and other public bodies. We think the medical Section should have evening meetings, for which there is the example of both houses of Parliament. Seven days do not afford nearly sufficient scope for the reading of papers and the necessary discussions. Two or three hours, every evening, should be dedicated to these purposes.

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OBSERVATIONS ON THE VARIETIES OF TRUSSES.

Mr. Acret, an ingenious truss-maker of London has lately published a treatise on hernia, chiefly addressed to the non-professional public. We may safely be excused from noticing its anatomical, and surgical portions, but we think we may introduce the observations of a scientific truss-maker on the various forms, the different uses, and the relative advantages of trusses. The information may probably be serviceable to many of our country readers.

It is rather remarkable how much more frequent hernia would seem to have become of late, were the number of trusses distributed from year to year to be taken as an indication of the comparative increase or decrease of the disease. Fifty years ago, says Mr. Acret, there were only five truss-makers in London, and I believe not one truss society; now there are forty truss-makers, and several truss societies, many of which societies make annual increases to the number of trusses for gratuitous distribution. The City of London Truss Society, in 1818, gave away 227 trusses, in 1830, 4226. How can we account for this extraordinary increased demand for the remedy, otherwise than by the greater frequency of the malady; and yet labour is assigned as the principal cause. It is true this great demand for trusses may be partly accounted for by the fact, that the instruments being now more perfect in

their construction and the complaint better understood, it is not so much neglected as formerly, yet this admission can apply only to a small extent."

Mr. Acret remarks that trusses may be classed under the terms elastic and non-elastic, or trusses with and without springs. The trusses he describes particularly are Gawan's Non-elastic truss—the Old Serpent Truss—Egg's German Truss—Cole's Trusses for Scrotal and for Inguinal Herniæ—Salmon's Opposite-sided Truss—and Adams' Graduated Pressure Truss.

I. *Gawan's Non-elastic Truss.*

This is nothing more than a stuffed belt, with a pad and straps. It is not elastic. All surgeons conspire to condemn this as unsafe, and consequently an improper instrument.

II. *The Serpent Truss.*

This is usually called the "Common Truss." It is on the whole a very good one. In its application the pad is placed just above the os pubis, and secured in that situation by the under strap, or what is usually called the thigh strap. Attention to the form of the pad is of the greatest importance, as on it depends the security and comfort of the wearer. To secure the rupture is of course the first consideration, the comfort of the patient the second. Some ruptures are of that description that we are necessarily obliged to use that form of pad which it is painful to wear; others are so easily secured as to leave us at full liberty to choose the easiest form of pad. It is desirable that the pad should be so constructed as to secure the rupture, without subjecting the spermatic cord to pressure. Mr. Acret would say that in every case of external inguinal hernia, where the natural distance of the rings is preserved, a convex pad will be found to answer best, for these reasons, that such a pad most effectually closes the canal and upper opening, and is more likely to produce a radical cure: that less risk is incurred of bruising the cord; that it is less in the way in stooping or sitting; and that it is much the easiest form of pad to wear.

If the hernia be internal inguinal, in which case the contents pass direct from

the abdomen without traversing the canal, elevation in the centre of the pad would render it useless, because in this case we require the pressure close to the bone; here then we must apply a flat pad or as is sometimes necessary, one with an elevated circumference. When the case is external inguinal hernia, but the upper ring has approximated towards the lower one, thereby shortening the length of the canal; so far as this has taken place must the convexity of the pad be lessened or removed. In some cases the most secure pad is one that is convex at the extreme end and lower edge of the pad. The difference, in point of comfort, between a flat and convex pad is proved by the frequent complaints made by patients of the former, and the relief they experience when the latter is substituted. Mr. Acret blames the London Truss Society for employing the flat pads far too indiscriminately.

III. *Egg's Patent Truss.*

"Mr. Egg's truss is somewhat similar in shape to the Common Truss; but instead of the spring being made of sheet steel, it is made of bar steel, forged to the shape of oval wire, and drawn out tapering at the end most distant from the pad. The superiority of the elastic spring truss over the non-elastic is, that its elasticity enables it to keep a close though yielding compression on the ring during the alterations of size and different positions of the body; whereas in Egg's truss the spring is so compact that it has very little elasticity, and from the want of this elasticity it is named 'self resisting,' that is, the compression is constant without any relief. To adjust one of these trusses properly the spring should be set to the exact shape of the body. In shaping the common Truss it matters not how near the front pad approximates to the back of the truss, but in Egg's truss the spring is set very much open. From the compactness of the spring it requires great force to open it, it should therefore be so shaped that the distance between the pad and back of the truss is nearly equal to the diameter of the body; for instance, if the diameter of the body, at the groin,

be nine inches, then the diameter of the truss should be eight inches, and the same rule will apply let the hernia be large or small, only that a stronger or weaker spring must be selected, and so selected that when the truss is on the force requisite to open it to the diameter of the body shall be greater than the impetus by which the rupture is protruded. The supposed superiority of this truss is that it has no disposition to press beyond the one inch. Although it is professed that no straps are necessary, yet in many instances the truss is useless without them."

Mr. Acret has seen the parts much bruised by these trusses. He could never wear one himself for more than half an hour. We think, however, he rather over-rates the inconveniences arising from their use. We have known several patients wear Egg's trusses with great advantage and with little discomfort.

IV. *Cole's Trusses.*

Mr. Cole is the inventor of two trusses; one which he calls his Scrotal Bandage, and the other adapted for Inguinal Herniæ, which have not passed the lower ring. The former, Mr. Acret, strongly condemns, as it offers no provision for adaptation to the occasional difference in the size of the body.

"Mr. Cole's truss for inguinal hernia is certainly a much lighter and more useful instrument than his scrotal bandage, the spring of this truss, instead of being made of sheet steel, as most others are, is made from bar steel forged; and as this description of spring has not that elasticity which will be found in those made of sheet steel, the difference is made up by the introduction of a spiral spring. Some of these trusses are made with a three-quarter spring and some with a half-spring; the former intended to apply on the opposite side, the latter on the same side, but they both require a strap to finish the circumference of the body. The truss has two pads, back and front: the back pad is round, similar to Salmon's and rests on the centre of the back; the front pad is similar in shape to the Common Truss, the spiral springs are placed on each pad, and causes the

yielding resistance spoken of by Mr. Cole."

V. *Adam's Graduated Pressure Truss.*

The objections to this are so strong that we need not particularly describe it.

VI. *Salmon's Self-adjusting Truss.*

This is so familiar to the public and profession that description is unnecessary. Mr. Acret thinks that it approaches nearer to perfection than any other instrument in use. The cases where he has found it fail are, in direct inguinal hernia, especially if only on one side. In persons who have no fall in the back, or when the os sacrum happens to be situated very high in relation to the os pubis, and in persons having a prominent os pubis and flat abdomen. In the first case an under strap is indispensable and cannot be used with the opposite-sided truss; in the second case the back pad will inevitably slide down and the truss fall off; and in the third case the front cushion slips up and allows the rupture to escape.

Such are the trusses most employed at present. Mr. Acret offers the following remarks upon their application to inguinal herniæ.

"If the case is external inguinal hernia and the protrusion has not descended into the scrotum, almost any kind of elastic truss, if well made and properly fitted, will secure the rupture, and in such cases we have full liberty to study the patient's comfort. Salmon's truss made to fit well, will be generally found to be the most comfortable, or one of Cole's Inguinal Trusses may be worn with advantage, or the Common Truss with a convex pad; indeed, in mild cases like these, the patient may make his own choice, selecting that which he thinks will inconvenience him the least, but bearing in mind that, when there is great general relaxation, the pad must be rather large. If the complaint has descended into the scrotum, one of Salmon's may still be applied, only the pressure must be greater, and the point of pressure placed nearer the bottom of the pad, or the Common Truss may be applied, with the alteration in the pad suggest-

ed a few pages back. Egg's truss may also be applied in these cases, if the patient can wear it with comfort. If the case is direct inguinal hernia, a Common Truss, with a flat pad, will generally be found the most secure; but as the protrusion in direct inguinal hernia descends immediately into the scrotum, and great difficulty is frequently experienced in securing it; it is impossible to lay down any decided rule for forming the pad; we must be governed by the nature of the difficulties which arise."

A TREATISE ON THE MORE OBSCURE AFFECTIONS OF THE BRAIN, ON WHICH THE NATURE AND SUCCESSFUL TREATMENT OF MANY CHRONIC DISEASES DEPEND; BEING THE GULSTONIAN LECTURES, DELIVERED AT THE COLLEGE OF PHYSICIANS, IN MAY, 1835. By A. P. W. PHILIP, M. D. F. R. S. L. and E., Fellow of the Royal Colleges of Physicians of London and Edinburgh, &c.

If ever unmixed happiness has been the lot of man, in this sublunary scene—in this vale of tears, that man is Dr. Wilson Philip! He has attained the summit of his hopes—and, better still, the zenith of his ambition—the FELLOWSHIP of the temple in Pall Mall East! And well he deserves that supreme honour. None ever worked harder or longer (except Dr. Pearson, who died by studying Greek in his 80th year to *pass* the College) than Dr. W. Philip! We almost envy him his happiness—though not his honours. After 20 years, or more, of descent from the meridian of life, and after having acquired a fair distinction in his profession it was hardly worth his while to *brush* the dust from the feet of the young and *unlicked* cubs of Oxford and Cambridge, in order to sit at the bottom of the bench, and, with grateful tear in the eye of the ancient neophyte, "adore and burn" at the shrine of the PRESIDENT!

Such is the melancholy and too common picture of human nature, when ambition takes the wrong direction, and the laudable love of fame dribbles

down into the paltry vanity of personal titles and distinctions.

Shakespeare tells us that some are born to honours—some acquire honours—and others have honours thrust upon them. Unquestionably the *acquisition* of honours is the most honourable; but this depends on the means. Did the neophyte FELLOW join with his FELLOW LICENTIATES, in their petition to the Legislature for reformation in the College? Not he, indeed! His answer to the application was (he can contradict it if we are wrongly informed), that he did not understand *medical politics*! Oh no; but he appears to have been an adept in *medical policy*. He knew a "hawk from a handsaw"—and he had wisdom enough to perceive that, by throwing overboard the REFORMERS, he would gain a niche in the temple of the CORPORATORS! Well; he has taken his low dark seat in the MAUSOLEUM of the TEMPLARS; and, with breathless haste, has issued forth the heraldic proclamation of his collegiate honours and Gulstonian exploits. The hen makes a great noise when she drops an egg—but she brings forth original eggs, and *hatches* original chickens. Not so the Gulstonian lecturer. He has no *new* eggs to lay—and, therefore, he *hashes* up the heads and plucks, the gizzards and the giblets of his dead progeny, as a dainty dish to set before the President and Fellows of the College of Physicians! When the last OLLA PODRIDA came forth—the treatise on "SLEEP and DEATH"—we imagined that, as the "brains were out, the man would die;" but we calculated without our host. We did not reckon on a new incarnation of VISHNOU—a tenth AVATAR! Harvey and Gulston must have been veritable Hindoos. They were determined that their troubled spirits should rise annually, to be annually merged in the sea of oblivion! Here we have resuscitated the ghosts of all that have run their brief span of existence for 20 years past! Le Gallois—the French Academy—the frogs—the burning wires run down the spines—the vital functions—indigestion—dispeptic phthisis—minute doses of mercury—sleep and death—all flit, in some shape or other,

before our eyes, in every page of this work. This eternal resurrection of dead matters, and fruitless attempts to re-animate them, again and again, by infusing into them those "vital functions" which have long evaporated into air, is most injurious to Dr. Philip's fame. If he can produce nothing new, he should allow old and effete matters to rest quietly in their tombs. Their annual disinterment can only bring forth the chlorides of satire to correct their feter.

Dr. Philip seems mortified, and well he may, that his physiological experiments and doctrines have made so little impression on the public! After all the years that have been devoted to establish the "laws of the vital functions," and the hecatombs of rabbits, frogs, and other animals that have been sacrificed at the shrine of science, so ignorant is the world of these same laws—"that even our most respectable writers seem hardly aware that they have been made a subject of inquiry." Now we cannot help sympathising with the Doctor, in consequence of this almost total neglect of his numerous experiments and elaborate inquiries; but the public will only swallow what it likes of men's lucubrations, and it is needless to repine or remonstrate. Dr. Philip does not take it much to heart, that "the medical scribblers of the day" are ignorant or negligent of his "LAWS;" but "when such men as Dr. Alison and Dr. Henry maintain opinions in direct opposition" to what Dr. Philip knows to be the true orthodox faith in Physiology, then, Dr. P. tells us—"it is time seriously to REVIEW the subject." This is alarming intelligence! Dr. Philip turned REVIEWER, after all his ire against that class of scribblers. Thank God, we reviewers are not, like the Fellows of the College, obliged to listen to Dr. Philip's reviews—especially reviews of *his own books*! We shall very coolly pass over the whole of this *hash*, so often set before the reader on former occasions, and now absolutely nauseous—together with the *Philippics* against the two Doctors abovementioned, and who are quite able to defend themselves.

It is not till 80 pages of letter-press are despatched that the reader will find any attempt to come at all to the subject which the title-page would lead him to expect. In the third chapter, then, we are told that there is established a sympathy between the brain and the stomach." "Even a piece of bad news will instantaneously destroy appetite"—a piece of information which Shakespeare handed down to us 200 years ago, or thereabouts! As the cause of indigestion, then may be in the brain or spinal marrow, though the effects are only cognizable in the stomach, it is a great object to discover the diagnosis in such cases. Dr. Philip intimates that he has discovered this said diagnosis, in cases where "some of the most eminent of our profession" had failed, and, indeed, gave a contrary opinion as to the real seat of the disease. This is not far from the PUFF indirect. But let us come to the diagnosis itself.

"The nature of the cases in which the original cause of the disease is confined to the brain, precludes the possibility of deriving the diagnosis from any particular train of symptoms; it must be collected from a review of the whole circumstances of the case; from the nature of the remote causes, both predisposing and occasional, the general course of the symptoms, and the effects of the means employed. I shall enumerate the circumstances which chiefly demand attention, and endeavour more particularly to point out the principles on which the diagnosis must be founded.

When the patient is not of a variable and hysterical habit—when the occasional causes have been of a serious and permanent nature, and the nervous symptoms have not shewn themselves for some time after the first application of such causes—when there is not such derangement in the digestive or other organs chiefly affected as accounts for the severity of the nervous symptoms—when the affections, both of mind and body, are less variable than is usual in what are called nervous complaints, and particularly apt to be referred to the same parts of the body—when there is constantly a more or less general

tendency to derangement in the secreting system when the heart is more irritable and the lungs less free, the nervous symptoms not yielding so readily as usual, the depression of spirits more uniform, and the pulse tighter than we should expect to find it from the other symptoms—when either the recurrence of feverishness, or a sense of chilliness and debility, is more frequent than is usual in nervous complaints—when the constitution seems more affected than usual by the continuance of the disease, the strength on the whole decaying—and particularly when the countenance assumes a sallow colour, and an habitually irritable and anxious expression; when the usual means are not attended with their usual effects, our stomachic medicines being in a great degree powerless, and alteratives producing but a transitory, if any, improvement in the abdominal secretions; when these, or several of these circumstances, are well marked in what are called nervous complaints, I have been assured, by repeated observation, *that they are not to be safely disregarded.*"

We quite agree with Dr. Philip, that these symptoms should not be disregarded, whether the cause be in the head or the stomach; but if the reader has been able to pick up any thing definite out of the foregoing diagnosis, we congratulate him on his penetration. We have not been able to do so—but then we are only the ignoble scribblers of the day entirely beneath the notice of Dr. Philip. It is to be remembered, however, that the author, in one of his almost innumerable writings (for he is the most voluminous scribbler now existing in the profession), has laid it down as a LAW, that when organic disease is produced by *indigestion*, the morbid appearances are not to be sought in the digestive organs themselves, but in the brain, heart, lungs, or other distant parts. And now the obscurity is rendered doubly obscure by the present doctrine, that many diseases, apparently of the digestive organs, have their fons et origo in the brain! Dr. Philip is a veritable PROTEUS. Catch him as an eel (no

easy job), and he turns into a bullock. Seize the bull by the horns, and he instantly disappears under ground as a rabbit—or hops into the marsh as a frog. It is morally and physically impossible to lay hold of him!

But we must now come to close quarters with our champion and see what he is made of. "In the mean time (says he), the nature of the disease will be farther illustrated, by turning the attention to the appearances on dissection." Before a dissection of these cases is given, Dr. P. takes care to tell us that they had been treated as common nervous or bilious complaints; in which *I* had stated to the other medical attendants, that, notwithstanding there were *no symptoms* referred to the *head*, we should find the *brain* organically affected." This was a tolerably bold prognosis; and the enunciation is as modest as any that could proceed from Ramadge, the consumption-curer—Eady, the friend of the constitution—St. John Long, the quicksilver-extractor—Morrison, the hygeist, or any other medical Hercules of the day! The reader is, of course, prepared for a clear, candid, and *authentic* statement of the cases, both as to symptoms and dissection. We give the statement in Dr. Philip's own words.

"The first case I shall mention is that of Mr. A., who was taken ill while pursuing his studies at Oxford. His case was regarded by the physicians of that city as one of *common indigestion*.* His health not improving, he was brought to London, and placed under the care of two physicians well known to the profession here. After he had been in London a few weeks, I was called in, in consultation, and, guided by the circumstances *which have been laid before the College*, expressed my fears of a fatal termination, and stated my opinion, in consultation, that although the *stomach and duodenum* were the organs most prominently affected, I believed we should find the origin of the disease in the *brain*; and on dissection after death, which happened in

* The words marked in Italics have been so marked by ourselves.—REV.

a fortnight or three weeks after I saw the patient, and appeared to be the consequence of inanition, the following appearances presented themselves.

The body was examined by Mr. Walker, of St. George's Hospital. In this and the following dissection, the examination was made about twenty-four hours after death, and the body was free from fetor. The following is his report.

'On opening the cavity of the cranium, the membranes and the brain were found *tolerably healthy*, perhaps rather softer than usual, particularly as regards the cerebellum and base of the brain, which, together with the medulla oblongata and cerebral nerves, appeared reduced to a *pulpy state*; so much so that they would not bear the *slightest handling*.

The viscera in the cavity of the chest presented no unusual appearances; the stomach larger than usual, from distension, and presented that appearance which is called the 'hour-glass contraction' of that viscus in a more marked manner than is usually met with; the pylorus much more vascular than usual, and the duodenum much more dilated, vascular, and attenuated than is natural. The whole of the small intestines were more distended with flatus, and much more gorged with blood, than in the healthy state, and of a very dark colour. The liver, spleen, kidneys, and pancreas, were healthy.'

Will it be believed that, in a case which is to illustrate a great pathological principle, and which is to impugn the judgment of several physicians, and exalt Dr. Philip's diagnostic powers above them all, *not one single symptom of the ANONYMOUS case is stated*, whereby we might be able to judge of the reasons why Dr. P. delivered this inspired prophecy! We have no hesitation in averring, that a more disingenuous procedure (not to give it its proper name) was never ventured on, in puffing pamphlet or advertisement, than is here published to the world—and that as a Gulstonian lecture, delivered before the President and Fellows of the College of Physicians! We defy Dr. Philip—we defy the College—we defy

the whole profession to adduce a more shameless piece of SELF-EXALTATION, or a more gross insult to the other attending physicians, than is here portrayed.

But we have not done with this case. The membranes and the brain were "tolerably healthy," although the cerebellum, the medulla oblongata, and the cerebral nerves were in so pulpy a state that they would not bear the "slightest handling." Now in such a state of brain, and within three weeks of the grave, we ask the profession if it was likely that there were *not* various lesions of sensation, volition, muscular power, and other attributes of sensorial integrity? We are not even told what the affections of the stomach and duodenum were in this case. Are we, therefore, to impugn the professional skill of several physicians, without a title of evidence, but the *ipse dixit* of the accuser! We call on Dr. Philip to authenticate this case, by stating the symptoms, and referring to the witnesses of the case. Till that is done, we shall doubt the correctness of the report. We are perfectly certain that the disorganization of brain above alluded to was attended, (if the case had been rigidly and accurately observed) by corresponding symptoms, and that the disorder of stomach or duodenum, whatever it was, did not engross the place of the other phenomena.

The second case in illustration will excite astonishment in the mind of every man who has been half a dozen years in the practice of his profession. We shall give it in the authors own words, marking some portions in italics, for the purpose of drawing attention to them more forcibly.

"The following case was that of Miss C., which run the same course as the preceding, but was of longer duration, having been protracted for more than two years; and here also the patient appeared to die of inanition. Some surprise was expressed that I should wish the head to be examined, as none of the symptoms had been referred to it. The examination was made by Mr. Earle, and the appearances in the brain corresponded in a remarkable degree, with those just detailed. The

symptoms in these cases, as well as the termination of the disease, had been similar, and we find the chief organic affection of the brain of the same kind, and seated in the same parts. The following is Mr. Earle's account of the appearances:—

'In the head, slight effusion beneath the arachnoid membrane: substance of the brain very soft, particularly the crura cerebri and upper part of the pons varolii, which was quite pulpy. Blood-vessels in the substance of the brain large, and loaded with blood. In the chest, right lung greatly compressed by the narrowness of the inferior margin of the ribs, from old adhesions between the pleura costalis and pulmonalis. *Substance of the lung firm and hepatized.* Left lung more healthy than the right, but slightly hepatized at its upper part.' 'This state of the lungs it may be remarked is peculiarly characteristic of a failure of nervous influence as appears from those experiments in which the influence of the brain was prevented from reaching the lungs. The patient had been subject to *cough and oppressed breathing*; pulmonary symptoms, however, had never been a prominent part of the disease. 'The heart,' Mr. Earle proceeds, '*was remarkably small.* In the pericardium, about two ounces of water. In the abdomen, stomach and duodenum much displaced by the compression of the chest by the stays. Towards the pylorus, the stomach much *thickened and indurated*, the *pylorus hard and contracted.* The duodenum large and flaccid; the mucous surface very vascular, villous, and soft, readily breaking down on the *slightest touch*, and apparently approaching to a state of *ulceration.* Liver *almost of a black colour*, and gorged with venous blood: substance of the liver *hardened.* Spleen and kidneys small, but not unhealthy. Intestines generally of a dark colour, from venous congestion.'"

Here, as usual, we have nominal and unauthenticated cases, as far as the history and symptoms are concerned. We ask the profession, for it is needless to ask Dr. Philip, who is blinded by his hypothesis, whether the organic lesions in the thoracic and abdominal

viscera are not infinitely more important than those in the brain—and whether it was not far more likely that the state of the cerebral mass was the *consequence* of the various organic changes in the viscera, than the *cause* of them all? We venture to say that not a single physician or pathologist between the Tay and the Thames will undertake to support Dr. Philip's view of the above case.

We shall not enter upon the principles of treatment discussed by Dr. Philip. Considering his principles of pathology to be narrow, biassed—and, in short, erroneous, we can have no confidence in any *ratio medendi*, founded on such a basis. We shall only observe that mercury and antimony appear to be the panacæa for this class of diseases, and that if the reader is desirous to have the details of the practice, he need not apply to this publication, for the following substantial reason:—"In my treatise on the means of preserving health, and particularly the prevention of organic diseases, I have entered into the particulars of the treatment, the general principles of which I have here endeavoured to explain."

SUBCUTANEOUS INFLAMMATION. By DR. ELLIOTSON.

I have a case, Gentlemen, to speak to you about which is very interesting; it is that of George Hemmings, who was admitted the 4th of last month, with inflammation of the sub-cutaneous cellular tissue. He is about 40 years of age, of a sallow complexion, and has lived intemperately: he has been occasionally subject to attacks of bilious vomiting during the last two years. It appears from his statement that he caught cold last winter while under the influence of mercury, and that he has not been well since. A fortnight since, he was attacked with rigors, which were followed by heat, pain in the head, and thirst. The left side of his throat became sore, the right side of it was also shortly after affected. He observed in a few days that on the right side of the neck and upper portion of the chest, the skin was red, swollen, and very tender when pressure was made on it. He was bled twice for these symptoms.

and leeches and a blister were applied to the left side of the chest, which was slightly indurated, but not redder than natural. These measures did not remove the symptoms, but, on the contrary, they continued to extend, spreading quickly over the shoulders, the inside of the arm, and fore-arm, so that motion was attended with much pain. When pressed on, the redness disappears, but immediately the pressure is removed, it returns. Pressure on the calves of the leg gives him pain, particularly on the left one; several indurated lines can be traced on them. There is pain in the popliteal space, on extending the knee joint, and tenderness of the epigastrium on pressure.

He is troubled with a slight cough, which is attended with expectoration of a frothy mucus. Respiration is sibilant over the whole chest, but more especially on the left side; he experiences pain on taking a deep inspiration. His pulse is 90, and rather full—he has considerable thirst, and his bowels are confined—urine scanty and high-coloured—the tongue covered with a yellow fur, in the middle clear, and moist round the edges—countenance anxious. Such is the report of the symptoms on his admission. I concluded at once that there the sub-cutaneous cellular tissue was inflamed. I ordered the shoulders, arms, and the right side of the neck, to be washed with a solution of the nitrate of silver, and ten grains of the pill hydrarg. to be taken every six hours. The caustic had the effect of stopping the extension of the inflammation. The tonsils, velum, and the adjacent mucous membrane became inflamed, for which he was ordered an opening draught and a gargle.

On the 7th he was much better, the neck was softer and less tender on pressure—the mercury affected the gums slightly.

Up to the 23d there was nothing remarkable occurred; he had occasionally slight rheumatic pains about the shoulders; for these he was blistered and relieved—a tonic mixture was afterwards ordered, and save a slight tenderness and hardness in the calves of his legs, with occasional rheumatic

pains in the palm of the left hand, and ball of the thumb, he did well; and on the 19th was reported cured.

This case is interesting from the plan of treatment adopted: you may probably remember, that in one case, similar to the present, which we had a short time since in this hospital, that the nitrate of silver was applied, but it had not the effect of stopping the progress of the disease: the man died. On examination after death, the cellular tissue was found in a pulpy, pappy state; but not more so under the parts where the caustic had been applied, therefore that could not be said to have increased the disease. Besides, the gentleman who applied the remedy had done it improperly and partially, rubbing the skin with the caustic in the stuck, not, as it should be, in solution. In the present instance, when properly applied, the effect has been decided and successful. The profession are indebted to Mr. Higginbottom for their acquaintance with the use of this medicine externally. It is unquestionably one of the greatest improvements in the modern history of medicine. Before the use of this medicine was known in erysipelas, cases of attacks of that disease in the head used to distress and annoy me. No matter what means were employed, bleeding, mercury, and cold, seemed equally uncertain in their operations; but, since the introduction of this medicine, I do not dread these cases as I used. I have applied it very many times with the most decided success, and I can confidently recommend its employment. The case just related is a most decided proof of its utility. The man was of weak constitution, and bleeding could not have been resorted to: here was a fearful inflammation going on, and, but for this medicine, would probably have terminated fatally. I have used the nitrate of silver in other cases attended with discharges from the rectum, the urethra, and vagina, as an injection, in one-tenth of a grain in gonorrhœa, and one-fourth in leucorrhœa. It has also, certainly, great power taken internally in various nervous diseases, particularly hysteria and epilepsy.—*Dr. Ryan's Journal.*

II.

CLINICAL REVIEW.

PENNSYLVANIA HOSPITAL.

REPORT OF CASES TREATED IN THE
SURGICAL WARDS. By T. S. KIRK-
BRIDE, M. D. Resident Physician.*

This Report contains some very interesting cases, and is worthy the attention of those who love to study facts, the only genuine philosophy. We shall endeavour to abridge the details of the cases as far as is consistent with the preservation of their intrinsic interest and value. Two instances of strangulated hernia are recorded, each displaying some peculiar features.

I. HERNIA.

CASE 1. *Strangulated Congenital Hernia—radical cure from placing the Testicle at the Neck of the Sac.*

J. B. æt. 22, a hack-driver, was admitted Aug. 30, 1833, at half-past 11 A. M. with strangulated scrotal hernia. The symptoms of strangulation had existed since early the preceding evening. Ineffectual attempts at reduction had been made.

On admission, the scrotal swelling large and tense, and the parts very tender; he suffers severe pain; has a quick and feeble pulse, cold skin, and great anxiety of countenance. He vomits occasionally, and has hiccup; after trying the usual means for restoring the intestine, an operation was performed by Dr. BARTON at 1 P. M. Upon opening the sac, it was found filled with a dark fluid almost like blood, and having a peculiarly unpleasant odour, strongly resembling that of gangrene; the intestine also presented a very dark appearance. Some adhesions existed between the tunica vaginalis and the intestine; the point of stricture was at the neck of the sac, and so close that a director was introduced with some difficulty. After re-

turning the intestine into the abdominal cavity, it was evident that so large an opening existed, that if treated in the usual way, the patient would be liable to returns of the accident, or at all events, would be always compelled to wear a truss. But the testicle had never descended into the scrotum, being retained in the groin by the shortness of the cord, where it lay in contact with the intestine; it was therefore introduced into the mouth of the sac, with the prospect of adhesions taking place so as to prevent the possibility another protrusion, and thus to effect a radical cure. The parts were neatly adjusted over it with sutures and compresses secured by the T-bandage.

The patient was ordered fifty drops of laudanum, and small quantities of barley water. On the next day there was slight pain in the stomach, and a disposition to nausea. The bowels were not relieved till after two doses of castor oil had been taken. On the 2nd September there was slight erysipelatous inflammation in the groin—the abdomen was tympanitic—there was vomiting. Fomentations and mutton broth were ordered. Relief occurred in the evening, and next day there was a slight discharge of purulent matter from the wound. After this nothing of consequence took place. The wound united, in part by adhesions and in part by granulations, and in October, the patient would seem to have been dismissed from the hospital cured. In June, 1834, he met Dr Kirkbride, and informed him that since he left the institution, he had been following his usual occupation in his usual way. For a few weeks he occasionally had pains shooting through the abdomen. Subsequently he had suffered no inconvenience, and had required no truss in consequence of the firmness of the parts and the perfect closure of the opening.

Dr. Kirkbride offers the following observation:—

* American Journal of the Medical Sciences, February, 1835.

"In this case the point of particular interest is the accomplishment of a *radical cure*, effected by the novel mode of filling up the mouth of the sac by placing the testicle in it, and by its subsequent adhesions to the neighbouring parts, without, in all probability, any interference with the functions of the gland."

There is one practical point to which we would direct a moment's attention. It will be observed that on the third day after the operation, the patient was attacked with irritability of the stomach, vomiting, and a tympanitic condition of the abdomen, and there also appeared an erysipelatous blush about the groin. Mutton broth and fomentations removed the symptoms. We have on several occasions witnessed symptoms of this character, but of greater severity, occurring after the operation for hernia. On the second or third day, the patient has presented a frequent pulse, a hot skin, a foul tongue, a tympanitic state of the abdomen attended with tenderness on pressure, and general depression, if not prostration, and these symptoms have manifestly depended on the formation of some matter in or about the wound. We have seen a patient leeches and bled and calomelized under these circumstances, when the result has proved that fomentations and poultices to the part, and perhaps such nutriment, as broth, or arrow-root, would have been more appropriate measures. It is very desirable to avoid peritoneal inflammation, yet many individuals require judicious support, and not depletion, after the operation for strangulated hernia. This is frequently the case with elderly persons.

CASE 2. Strangulated Femoral Hernia—Sloughing of the Sac—Recovery.

Susan Baker, æt. 50, admitted Aug. 23, 1834, at noon, with strangulated femoral hernia. The hernia had existed for two years, but was always reduced in the recumbent posture, until four days prior to her admission, since which it could not be returned. She had had no motion from the bowels for five days. Soon after the descent of

the tumor she began to suffer from pain in the abdomen. Vomiting succeeded; and for several hours previous to her being brought into the hospital the matters vomited were stercoraceous. The skin was cool and moist, the pulse frequent and feeble, the countenance anxious. The operation was immediately performed by Dr. Barton.

The sac was found to be of an unusual thickness and contained but a small portion of fluid; the intestine had rather a dark colour, but did not appear to be gangrenous. So close was the stricture, that a director was passed with difficulty. After enlarging the opening slightly, the intestine was returned into the abdomen with considerable facility. The patient bore the operation well, and her pulse, immediately after, was better than at the time of her admission.

Half-past 4 p. m. The patient has vomited several times since the operation; the first discharge was of a yellow colour, and offensive but the last two or three appears to be bile, mixed with the secretions from the stomach. She has pain in the abdomen just before vomiting, but not at any other time. Her pulse is 100, soft, and regular; her skin is warm and dry; tongue slightly furred posteriorly, and inclined to dryness. R. Acid. tartar, ʒij.; Aquæ, ʒvj.; ft. sol. R. Sup. carb. sod. ʒij.; Aquæ, ʒvj.; ft. sol. S. Take ʒss. of each solution, effervescing every half hour.

The vomiting ceased. In the evening she had one scanty, dark, thin, evacuation. In the night of the 24th, she had fomentations. The general symptoms were so favourable, as not to require specific mention. On the 26th suppuration was commencing in the wound with some appearance of sloughing in the sac. On the 28th, the whole of the sac had sloughed away. The wound granulated, healed, and the patient was discharged cured on the 20th of September.

"This case," says Dr. Kirkbride, "is a very interesting one, from the unusual thickness of the sac, and from the sloughing of it, without any inflammation extending to the peritoneum

generally, or even to the part contiguous to the sac, and from the *radical cure* effected by the loss of the sac, and by the firm adhesion established by the healing process. I visited the patient on the 27th of November, and found her enjoying good health; the parts are firm; she has never worn a truss, nor suffered any inconvenience in the parts."

II. TARDY UNION, AND ABSORPTION OF THE CALLUS OF FRACTURES.

CASE 3.—*Tardy Union—Friction of the Ends of Bone.*

"Dennis M'Fadden, æt. 30, labourer, of good constitution, but rather intemperate in his habits, was admitted on the 16th of May, 1834. While engaged, on the previous afternoon, at the Falls of the Schuylkill, assisting to raise heavy stones from a quarry, by means of a windlass and lever, by some means he lost his hold, so that the lever, in passing round, struck him violently upon the left arm, producing a fracture of the humerus, midway between the elbow and shoulder, throwing him a distance of ten feet, upon a pile of stones, and producing a fracture of the os femoris six inches from its inferior extremity. He has also received a severe contusion of the side, but no ribs were fractured. The arm was placed in pasteboard splints, and Desault's apparatus applied to the thigh. Ordered evaporating lotions; cups to the side."

Some blood appeared in the expectoration, and cupping was a second time resorted to. No further inflammatory symptoms followed; on the contrary the patient grew pallid and lost flesh, and, by the 16th of August, no union of the fractured bones had taken place.

On that day, friction of the ends of the humerus was made for the first time with considerable force, and continued for a few minutes without giving pain to the patient. This plan was persisted in daily for one week, when the parts began to be tender; during the next week it was done only every other day, and the pain of the operation increased on each repetition of it.

The operation was continued till the 1st of September, after which it was not repeated. On that day, the femur, was found to be uniting; on the 15th the patient was able to raise his leg without assistance, and the splints were in consequence removed. The humerus now appeared to be uniting, and, on the 30th, it was so firm as to bear the application of considerable force. The splints were retained upon the humerus until the 1st of November. On the 22d he was dismissed, having regained, in a great measure, the use of both the injured limbs.

CASE 4.—*Absorption of the Callus.*

William Brum, æt. 21, carter, of good constitution, and enjoying good health, was admitted into the hospital on the 16th of April, 1834, with fracture of both bones of the leg, about five inches above the ankle from the kick of a horse. There was no external wound, and a fragment of the tibia appeared detached. Suppuration took place, and a few small scales of bone passed through the opening. The separated portion of the bone united; suppuration ceased, and he was discharged on the 24th June. The ulcer had been well one week previous to his discharge, and during that time he had been walking about the grounds without the use of his crutches, his limb being perfectly firm. He again returned to the hospital on the 24th of July, with an ulcer over the seat of the fracture. He states, that after going out, he used his limb without inconvenience, but did not commence his usual occupation for a couple of weeks afterwards, and that after being employed for a few days he found the limb more painful; he continued to use it, however, and to live freely. One week before his re-admission, the ulcer broke out, but was of small size. On the 28th, a small spiculum was discharged, and the ulcer was reduced to a point. A probe introduced at this point, detected a portion of soft, bony matter. On the 15th of August without any assignable cause, the ulcer commenced sloughing, extended rapidly; his health began to suffer; he had chills, followed by

fever; lost his appetite, and became rather prostrated. The sloughing was finally arrested by the application of caustic potash over the whole ulcerated surface; at this time it was observed that the callus uniting the fractured tibia was completely absorbed, and that the fragments were perfectly moveable, this separation of the bone appearing to occur simultaneously with the sloughing of the soft parts. The caustic was now applied to the exposed bone; considerable inflammation occurred a few days afterwards, but the parts soon took on a healthy action, and gradually improved, union taking place between the fragments of the tibia, so that by the 25th of October the ulcer had nearly healed, and the bone had become so firm that it was removed from the fracture-box.

Some ulceration over the anterior surface of the tibia existed up to the latter end of November, and small portions of bone were discharged from it. On the first of December we find that no discharge had taken place, for ten days previous to that time, and the patient was able to walk without crutches. The subsequent particulars are not stated.

CASE 5.—*Absorption of the Callus.*

An omnibus driver, æt. 27, received a fracture of the left leg, about four inches below the knee, fracture of four or five of the ribs, and various severe contusions, in consequence of the wheel of the omnibus passing over him. Much swelling of the limb ensued, and fluctuation was distinctly felt in the groin. On the 30th of September, a collection of bloody serum just below the knee was opened; the swelling and fluctuation in the groin had disappeared, under the employment of a stimulating liniment.

By the 1st of October, the broken portions of bone had united; but considerable inflammation existed, from the knee to a short distance below the fracture. There was a discharge of serum, with oily globules floating in it, and some sloughs of the cellular membrane.

Oct. 12th. The swelling below the knee has gradually increased; it fluctuates slightly; a fluid may be pressed

down from the knee, as far as the spot where the tumor appears to point, and which is opposite the seat of fracture. Upon opening the tumor, the only discharge was about a gill of dark, grumous fluid, with small portions of coagulated blood. For the last three days, a decided diminution of the firmness of the bone has been observed, and to-day the absorption of the callus appears complete, as the fragments are perfectly moveable. The limb has always been kept in the fracture-box.

Copious suppuration followed this opening, and was accompanied with some degree of fever. The suppuration, after a short time, diminished, and gradually firm union of the bone again took place. The report on the 1st December runs thus:—Bone continues firm—ulcer healing. No further record of the case is presented.

We would offer a few observations on these cases. The first differed from the other two in this respect, that, in it, union was long in occurring, while, in those, the union which *had* taken place was impaired or destroyed by the process of absorption. We have witnessed several instances of either sort. So far as we have seen, want of union, or a very tardy union of fractured bone, has been, in all cases, the result of extreme constitutional debility. Of course, great disturbance of a broken bone is very likely to prevent its consolidation; but this is an extreme and an obvious case, and, in the greater number, this is not the cause of the deficiency of ossific matter. We will take the liberty of mentioning two cases, in illustration of what we have observed. When residing as house-surgeon in St. George's Hospital, we had under our care a groom, who had broken both bones of one leg. Little or no inflammation occurred, and all seemed doing well. The patient's health appeared to be good, and the limb was as quiet as could be wished. At the end of six weeks from the time when the limb was first put up in splints, we examined it, with the view of making the patient walk about on crutches. The union between the ends of the fractured

bone was so soft as to permit the leg to be bent. We now made a very particular inquiry into the habits of the patient. We found he had been in the habit of drinking large quantities of porter. We ordered him a pint and a half of his favourite beverage daily. In the course of a fortnight, the limb, was firmly united.

A house-surgeon received a middle-aged woman into St. George's Hospital, on account of a fracture of both bones of the leg, below its centre. She appeared to be healthy and tolerably strong, but she was corpulent, and of a very irritable habit. Some swelling and much spasm of the muscles of the limb ensued. The house-surgeon became alarmed, and freely bled the woman. She immediately felt exhausted, but the inflammatory and spasmodic symptoms subsided, and left the patient in a condition of some debility. Union never took place in the limb, and to this day she is unable to walk, even with the aid of an instrument, upon the limb.

Pregnancy notoriously prevents, in some instances, the union of a broken bone. The whole powers of the system are concentrated in the uterus. That this is the fact is evident, from the emaciation of the limbs in pregnant women, as well as by the cessation of the symptoms of phthisis, and other maladies during the period of gestation.

Any thing which debilitates, any thing which powerfully withdraws the vital energies and actions to another part, and, finally, any thing which interferes with the process itself of union of the bone, may prevent that union from occurring. The same agencies are capable of doing away with the union when formed. But mere debility is less operative, in this instance, than in the simple prevention of the occurrence of consolidation. The most common cause of (to use an improper term) the dissolution of union which has occurred is probably the supervention of disease in other parts of the body. We have seen several instances of this description. We recollect the case of a patient who had fractured the femur,

near the trochanter. The fracture had apparently united, and the patient was going about on crutches. An abrasion on the affected limb gave rise to a severe attack of erysipelas, and the latter was succeeded by acute pericarditis. After death, the upper and lower portions of the femur were found to be perfectly moveable upon each other. The ossific matter must have been absorbed with extreme rapidity.

III. DISLOCATION OF THE OS HUMERI ON THE DORSUM OF THE SCAPULA.

Case. The patient, æt. 55, had been in the hospital, three months previously, for a dislocation of the os humeri into the axilla. On this occasion, the opposite os humeri was dislocated, so as to be placed on the dorsum of the scapula, immediately below its spine. We need not enumerate the characters of the displacement. The following modes of reduction were resorted to.

"The first attempt made at reduction was nearly that recommended by Sir ASTLEY COOPER, and differing in no particular from that for a dislocation into the axilla. The patient being seated in a chair, the middle of a sheet was passed around the chest and its ends fastened secure to a post opposite to the injured shoulder. The arm, just above the elbow being covered with buckskin, another sheet was bound to it by means of a wet roller. The scapula was fixed by an assistant, making pressure against the acromion, the arm being nearly at right angles with the body, the pulleys were attached to the last-mentioned band, and extension was made firmly and steadily for nearly half an hour, while at the same time, efforts were made to dislodge the head of the bone by rotation, but without success.

Mr. C. M. COLEY of Bridgenorth, has recommended a different plan, which was also tried fully without success, (see *Cooper on Dislocations*, p. 405). This consists in elevating the whole arm, and rotating it outward as much as possible for the purpose of rolling the head of the humerus towards the axilla; when brought to resemble as nearly as possible a dislocation into the

axilla, the head of the bone is to be retained in its situation, and the arm brought into a horizontal position, after which extension is to be applied as in ordinary cases.

Having failed in these efforts, while the patient was kept in the same position, an additional counter-extending band was fastened by its middle around that previously used, where it passed immediately behind the scapula; the other end of this second band was fastened to a firm point a few feet distant, so that when extension was again made, its direction instead of being nearly horizontal and directly outwards, was considerably inclined inwards and forwards. The extending force was again applied, and in less than five minutes the displaced bone returned into the glenoid cavity, with a snap that was audible to the patient."

IV. INJURIES OF THE ABDOMEN.

Case 1. George Shivers, æt. 26, brickmaker, admitted August 26th, 1834. He is not very robust but has generally enjoyed good health. About 4, p. m. of the day of his admission, he was injured by being accidentally thrown down, and receiving several kicks from a horse, under whose feet he had fallen. He was brought to the hospital one hour afterwards. The blows appear to have been received over the epigastrium and right hypochondriac region, where the skin is slightly abraded; he suffers extreme pain throughout the abdomen, and has also some pain in the head, on which are three or four trifling wounds. He had vomited before his admission, but no blood existed in the discharges; there has been no vomiting since he entered the hospital; the surface of the body generally is cool, that of the extremities strikingly so, and his pulse is very feeble and frequent. Stimulants and a grain of opium were given.

The patient slept little in the night, and next day there was intense pain in the lower part of the abdomen. There was tympanites, and some pyrexia. *Blister on the abdomen.* On the 29th the pain was less, the tympanites great-

er, the respirations were short, and deep inspiration impossible. In the evening the skin and conjunctiva were become saffron-coloured, and the urine was similarly tinged. *Salines and opiates.* On the 31st, he had a loose discharge of blood from the bowels. On the 2d Sept. there was a similar discharge, and again another on the 6th. The yellowness of the skin diminished, as did the pain in the abdomen; the respiration was more free. The treatment consisted in mild diet, and oleaginous mixtures.

On the 9th there was a return of pain, with vomiting, anxiety of countenance, and increased dyspnœa. These symptoms were relieved by effervescing draughts, with opium. On the 16th, a smooth tumor could be felt on the left side of the abdomen, two inches below the ribs. The pulse was feeble, and ranged from 100 to 130, the tongue was disposed to dryness, and was always red at the tip and edges. He was ordered calomel and opium. On the 26th, he had pain in his side, and inability to take a deep inspiration. A blister was applied with benefit. No great alteration in the symptoms occurred until the 22d of October. The gums, had in the interim, been slightly affected by the mercury. On the 22d, there was violent pain, succeeded by chilliness and fever. On the next day this was aggravated, with hurried respiration and tenderness of the left side, near the edge of the ribs. Seventy leeches were applied to the side, with effect of producing a temporary mitigation of the pain. He became, however, delirious, pain became established in the right side, he gradually sank, and, on the 29th, he died.

Dissection. The peritoneal cavity contained about a quart of turbid, straw-coloured serum, with flakes of lymph floating in it. Pus was observed upon the membrane covering the intestines and upper surface of the liver; strong adhesions existed among the parts about the under surface of the liver and gall-bladder. The small intestines presented the Peyerian glands distinct, and slightly reticulated, but not ulcerated. Ulcerations were ob-

served in almost every part of the large intestine, particularly in the lower two thirds. The ulcers were generally an eighth of an inch in diameter, with abrupt edges, and a cellular bottom. The liver was much enlarged and of a dull green colour throughout.

In the thorax, the right pleura contained about a pint of light straw coloured serum, with flakes of lymph floating in it. The left contained less than half a pint with no lymph.

In this case it seems doubtful what amount or what exact description of injury was inflicted in the first instance. That no important viscus was materially affected would seem to be evident from the absence of proof of any such occurrence, on examination of the body after death. The patient died in consequence of chronic inflammation of the mucous membrane of the intestines and of the peritoneum. We cannot avoid entertaining the suspicion that more depletory measures at first would have been serviceable. We have seen many instances of abdominal injury, in which the symptoms were even more severe than in this, where vigorous, continued, and judicious depletion saved or seemed to save the patient's life. The prostration of strength, weak pulse, and cold extremities which frequently appear to forbid bleeding of every description, are commonly deceptive. We have seen the most extreme collapse where no important viscus was materially damaged. The surgeon ought always to act with caution, but still he ought to act.

Case 2. A labourer, æt. 43, admitted at 10 A. M. of the 25th October, 1834, the wheel of a cart having passed over the abdomen. When admitted, he complained of excruciating pain throughout the abdomen—the countenance was pallid and anxious—the skin cool and moist—the pulse very feeble and frequent—the respiration hurried. Stimulating applications were made to the extremities; a terebinthinate enema administered, and opium given *pro re nata*, to allay the excessive pain which he suffered. No re-action how-

ever was produced by the remedies; the abdomen soon became tympanitic; percussion was resonant in every part, and there was no distention of the bladder to be detected, although he had passed no urine since the accident. On the morning of the 26th, he discharged half a pint of liquid blood through the urethra, but no urine, and a catheter, which was afterwards introduced, brought away a small quantity of blood only. Death at 10 A. M.

Dissection. No appearances of any moment in the head or chest.

The abdomen was much distended, and contained a pint of liquid blood: while large effusions existed throughout the cellular substance on the posterior part of the abdomen, particularly in the region of the kidneys, and superior surface of the liver. This organ large, strongly adherent to the diaphragm; on its upper surface, under the peritoneal covering, exists an effusion of blood about three inches in diameter, immediately under which are found three fissures in the substance of the liver, with rough edges, each about one inch long, and one-fourth of an inch deep. In the substance of the liver, one third of its thickness from the upper surface, is an isolated clot of blood of the size of a large almond. The right kidney was broken completely across with several fissures in its substance. The left kidney was also fissured. The bladder was contracted, and contained no urine.

V. SLOUGHING ABOUT THE ANUS— KREOSOTE.

A labourer, æt. 42, admitted for dysentery, Aug. 16, 1834. The dysentery had existed for a week, and required little attention after the second day of his residence in the house. On the 18th he experienced a sensation of weight and heat, and excessive tenderness on pressure in the parts around the anus. On the 20th, these parts were swollen and extremely painful. On examination they were found red, and hard, and exceedingly tender when pressed—the pulse was frequent—the

skin hot. Leeches, &c. were applied, but on the 22nd, a slough had formed on the left natis, and, an opening being made here, a large collection of offensive matter, with sloughs of cellular substance was discharged. A probe could be introduced to the distance of five inches on either side of the rappé. After this a large slough separated on the left side, and subsequently other sloughs were detached, leaving an immense ulcerated surface extending from each natis four or five inches along the rectum, and as far as the scrotum on the perineum. Stimulants and astringents (for diarrhœa) were the means resorted to, but seems from the report that a solution of kreosote of the strength of 12 drops to a pint of water, was extremely instrumental in destroying the offensive odour of the discharges, and promoting a healthy appearance of the parts. On the 18th of October, the patient was discharged, the parts having perfectly healed.

It is probable that many other applications than the kreosote would have proved beneficial in the case before us. The compound tincture of benzoin is an admirable application to the sores left after extensive sloughing. The parts should be freely washed with this twice or oftener in the day, and subsequently lint dipped in the following ointment warm and melted, should be applied

R Ung. elemi comp (Ph. L.) . . ʒi.

Bals. copaib. ʒi.

Unguent. Sambuci ʒj.

M. ft. Unguentum.

This local management of sloughing sores we have found extremely beneficial. When the sore is granulating and disposed to heal, the solution of the nitrate of silver, or the red wash of Bates should be substituted for the compound tincture of benzoin as a wash, and the calamine cerate should be used as an ointment. General treatment applicable to the case is indispensable of course.

There is only one other case that need detain us. We give it, being short, unabridged.

VI. TEMPORARY LOSS OF VISION.

Case. "Ann Brady, æt. fourteen, was admitted on the 6th of March, 1834. She is a domestic in the family of a gentleman of this city, and states that when engaged in her duties a few hours before, she had been injured by a spark flying from the fire, and striking her left eye directly over the pupil and that her vision immediately became indistinct. When admitted she complained of pain in the head; none whatever in her eye; she is unable to distinguish objects, but says there is the appearance of "a green cloud" constantly before her when her uninjured eye is closed. The appearance of the eye is perfectly natural; no change in the pupil, which contracts as usual on exposure to the light. Ordered cups to the head; mustard foot baths; cold applications to the eye; light excluded from it.

7th. To-day every thing before her is 'dark' when the uninjured eye is closed; she still has some pain in the head; none in the eye, the appearance of which continues natural. Apply thirty leeches to the temples; purge of calomel and rhubarb; cold applications and baths continued.

8th. Head-ache relieved yesterday by the leeches; has no power of vision; no change in the appearance of the eye; but now complains of deeply-seated pain in it. Ordered emplastr. vesicat. 4 × 5, on back of neck.

9th. Blister drew well. This evening she is able to extinguish light from darkness; has no pain whatever; pupil natural; no appearance of inflammation. Purge with sulph. magnes.

11th. Since last report patient's vision has been gradually improving, so that now she is able to distinguish objects near her, or count one's fingers when held within a few inches of the eye. Blister is kept open.

13th. Power of vision increasing; no pain; she is purged every other day.

17th. Patient is able to distinguish small objects across her room; but finds her sight bad in the evening; complains of pain in the head. Apply five cups to head.

19th. Vision nearly as good as that of the uninjured eye; blister healing.

21st. Has recovered her sight perfectly.

26th. Discharged."

This concludes the Report before us. It contains, as we observed, some interesting facts, interesting to those who possess a genuine philosophical regard for their instructive study. One great aim which we have ever had before us has been to discourage theory and the love of theory, and to cherish that spirit of inductive reasoning which rests on observation, and finds in it wholesome and delightful mental nutriment. We are not without some hopes of having laboured not altogether idly or in vain.

SIR PATRICK DUN'S HOSPITAL.

RECOVERY FROM A STATE OF FEVER ALMOST DESPERATE—DR. GRAVES.

"I shall now speak of the case of Christopher Nolan, which I trust you have all watched with attention. When this man came into the hospital, his condition appeared to be completely desperate, he has, however, not only rallied, but is now convalescing rapidly. It is unnecessary for me to enter into a detail of his case, as I trust you have all observed it through its different stages; I shall only remark, that on his admission he was labouring under fever of the worst character, his body was covered with maculæ, he lay constantly on his back, and had low muttering delirium, was unable or unwilling to answer questions, his breathing was oppressed, his pulse rapid, small and failing, the powers of life awfully prostrated,—in fact, he was in a state of apparently threatening dissolution.

My first object was to rouse the sinking powers of the system, and with that view I adopted the following treatment. He was put into a comfortable bed, and heat was restored to the surface by diligently rubbing his trunk and limbs with warm flannel. I next ordered a succession of flying blisters to

the neck, chest, and abdomen. I may observe here, that his chest was heaving, there was a general wheezing audible over the whole surface, and he had that peculiar livid expression of countenance and dusky hue of the skin, which indicate an imperfect aeration of the blood. With the view of stimulating the oppressed action of the respiratory nerves, I had two blisters applied, one on each side of the neck, above the clavicle; after remaining on for two hours, these were removed, and two more applied over the supra-mammary region, then over the heart and right side of the chest, and lastly over the epigastrium. In addition to this he was ordered to have wine and chicken broth, and the following draught was prescribed to be taken regularly every second hour until symptoms of reaction began to appear.

R. Misturæ camphoræ, ℞j.,

Liquoris anodynæ Hoffinani, ʒss.,

Spiritus ammoniæ aromatici, ʒss.

Moschi grana octo.

In employing blisters in this case my object was to stimulate powerfully and in rapid succession the integuments of the neck, chest, and abdomen. This practice has in such cases been attended with very marked effects, and in ours proved extremely valuable. Its efficacy seems to depend not on the discharge of serous fluid, or on any revulsive action of the blisters, but on the powerful stimulus applied to an extensive cutaneous surface. I may observe here, that, during the present epidemic, blisters have been one of our most efficient means of cure. In several bad cases I have blistered the nape of the neck, the chest, hypochondrium, and nearly the whole of the abdomen in succession, and often with remarkable benefit. In ordinary cases of fever, tenderness of the epigastrium, pain in the head, and derangement of the respiratory system, are best treated by the application of leeches, or even by the use of the lancet; but, in the present epidemic, I have observed that patients bear bleeding very badly, though practised at the commencement of the disease; and the same rule applies, though with less

force, to abstraction of blood by leeches or cupping-glasses. As far as my experience goes, local or general depletion should be resorted to with caution. I am not timid in the use of the lancet or leeches, but I have seen several cases of fever which terminated fatally, and these were chiefly cases where venesection had been performed at the commencement of the attack; and, with respect to leeching, I have found that those cases were very difficult of cure, in which, relying on my experience of former epidemics, I had leeches too freely for what I considered to be local congestion.

With respect to the general employment of blisters in fever, it is, I believe, a prevalent but erroneous practice to leave them on much longer than is necessary. I seldom let them remain on longer than four or five hours; I speak here of flying blisters, which are applied successively to the nape of the neck, interscapular region, chest and abdomen. Sometimes two or three hours will be sufficient. It is true that a blister will seldom rise in this space of time; but, though you have no serious discharge, the moment the skin under the blister becomes red, every purpose is accomplished; if the blister be removed, and the parts dressed with spermaceti ointment, it will rise in the course of a few hours. By acting in this way, two important advantages are obtained, you prevent the formation of bad sores, and obviate the risk of dysuria from the absorption of cantharides. It is in many cases extremely wrong to leave a blister on too long, and yet we see them frequently permitted to remain on for twelve, eighteen, and even twenty-four hours. If you excite the vessels of the skin by rubbing the part with a little proof spirit or oil of turpentine before the blister is applied, it will rise in three or four hours, if not it can be again applied. From a number of experiments made at the Meath Hospital, I have ascertained that the time necessary for producing the action of a blister is much shorter than is generally imagined. In some cases three hours, in some even two were sufficient, and in almost every

instance the irritation of the cutaneous surface was effected in four hours.

I have stated that in this case we gave wine and chicken broth. With respect to the regulation of diet, I may observe that in the present epidemic, a light nutritious diet may be prescribed at an early period of the disease. After the fourth or sixth day we are in the habit of giving chicken broth, light beer, and even small quantities of wine. I do not speak here of chicken tea, as it is termed, but of broth of good strength and flavour. There is another point with respect to nutriment which I would beg leave to impress on your attention. When you give nutriment be careful in observing the usual periods of meals. The space of time to which I limit the giving of chicken broth, jelly, arrow-root, and other mild articles of diet, is from eight o'clock in the morning to eight in the evening. Always make it a rule that your patient shall take nutriment within the space of those twelve hours during which he is accustomed to take his meals when in health, and allow him nothing but mild diluent fluids during the night. I am persuaded that I have seen much benefit derived from following this simple plan.

A few words in conclusion with respect to the stimulating draughts which we employed in this case with such remarkable effects. During the prevalence of those doctrines which attribute all fever to local inflammation, diffusible stimulants fell into neglect and disuse; but, since our knowledge has been rendered more certain and fixed by the results of a truer pathology, we have learned to estimate their real value. I do not by any means exaggerate when I say that I have seen many lives saved by a combination similar to that employed in the present case. Where there is great prostration of the powers of life, oppression of the nervous functions, and low, muttering delirium, I do not know of any remedy which can be ascribed with more advantage. You will, of course, while employing medicines of this description, attend to the state of the bowels. In the mixture we have ordered, you will perceive that the principal ingre-

dient is musk. Musk exercises a stimulant effect on the nervous system, without having any tendency to produce cerebral congestion or coma. Unlike those remedies which powerfully affect the nervous system, it does not produce intoxication or narcotism.—Hence it is that musk proves such a valuable stimulant in cases such as I have described, where there is reason to apprehend congestion of the brain. At the same time that you prescribe musk, you should assist its action by blisters judiciously applied. They may be applied along the sides of the neck, or over the chest, to excite the nerves of the heart, lungs, and diaphragm; or you may apply them between the shoulders and to the back of the neck, where your object is to act on the brain and spinal marrow. In cases like this, the best places for applying blisters are the neck, region of the heart, epigastrium, and spine. The blister should be small, and you should make up for their want of size by successive applications.

I have only to add that the treatment adopted in this case succeeded in again rousing the almost suspended powers of the system, the patient rallied, and his fever assumed a much more manageable aspect. I was obliged, however, to have recourse to the tartar emetic mixture with opium, in order to produce sleep. This completed his cure; from the time of its exhibition every thing went on well.”—*London Med. and Surg. Journal*.

BRISTOL INFIRMARY

OSTEO-SARCOMA OF BOTH JAWS, FOR WHICH AMPUTATION AT THE JOINT WAS PERFORMED. By W. HETLING, Esq. Lecturer on Surgery, and Surgeon to the Infirmary, Bristol.*

This case forms the subject of a pamphlet of 63 pages. It appears in every

way creditable to the daring surgeon who was the operator, and is the narrator of the particulars. We will give those particulars, before we advert to any of the observations of Mr. Hetling.

Case. Margaret Hunt, æt. 23, of a scrofulous habit, sallow complexion, and with a very feeble and limited intellect, was admitted into the Bristol Infirmary, 27th January, 1831, with a large and prominent tumour of the left side of the face, extending over both jaws, and appearing to fill up the cavity of the mouth; elevating and pushing before it the integuments of the cheek. The resistance which the cheek offered, repressed and flattened the surface of the tumour, and in consequence of this resistance, a portion of its lobulated structure was forced towards, and partly protruded at, the angle of the mouth between the lips. The integuments, also, both of the nose and eye, were disfigured from the same cause; forming, together, a very striking and fearful deformity of the face. The tumour extended from the upper to the lower jaw, to the latter of which it adhered so firmly as to render it completely immoveable, so that the patient could not masticate, and could scarcely articulate, being only enabled to answer questions put to her, by indistinctly mumbling yes or no. In this state she was compelled to live upon fluids, and even these were with difficulty swallowed, deglutition being much impeded by the pressure of the tumour upon the internal part of the mouth.

Upon accurately examining the internal part of the mouth with the finger, it was ascertained that the tumour originated in the superior maxillary bone; and that in its progress it had gradually extended backward into the palatine portion of the mouth, and been pressed forwards and downwards upon the lower jaw by the action of the cheek; where, by its long continued growth and increasing pressure, it had produced extensive absorption of that bone. The alveolar border and processes of both jaws, were nearly all removed on that side of the face, in the upper jaw not a tooth was left; in the lower only a few remained, loose and buried in the

* We have been accidentally prevented from noticing this interesting case at an earlier opportunity.—*Eds.*

medullary matter of the tumour. One rather unusual, and, with a view to an operation, favourable circumstance was, that the tumour prevented the closing of the mouth in consequence of its insinuating itself between, and adhering to both jaws, so as to render them fixed, to a certain degree asunder; this circumstance afforded the opportunity of exploring, by the finger the inside of the mouth, by which means it was ascertained that no adhesive, ulcerative, or fungating process had taken place between the surface of the tumour and the cheek, although they were in close contact, and, as may be supposed, firmly pressed together. The fact of finding the cheek free, healthy and unadhering, so as to allow the finger to pass between it and the tumour, and over its surface, quite up to the articulation, was an unexpected feature amidst such a mass of disease, and contributed to encourage the prospect of the projected operation. The elastic properties of the cheek had caused it gradually to yield, and accommodate itself to the growth of the tumour, in a manner similar to that which the parietes of the abdomen so remarkably exhibit in cases of dropsy. The glands of the neck were found free from disease.

Externally the tumor gave the sensation of firmness, from the tension of the cheek over it; but internally it felt soft and yielding, about the consistence of brain. The shape of the tumour may be conceived from the above description; with respect to its size, it was about equal to a large orange.

The friends of the patient stated that the swelling had commenced after exposure to cold, when the girl was between eleven and twelve years of age. Several of the teeth on the affected side had dropped out. Latterly there had been frequent and copious bleedings from the mouth.

On consideration of the circumstances of the case, Mr. Hetling, very judiciously determined to operate, and this view was supported by his colleagues in consultation. The mode of operating must be stated in the operator's words. We should state that a few days prior to the operation, he again accurately ex-

amined the parts, and removed the few remaining teeth out of his way.

"Feb. 16.—The patient was laid horizontally on the table, on the right side, the head moderately elevated on a firm pillow, so as to place the cheek in the most favourable position for the operation. Two fingers were introduced at the angle of the mouth, between the tumour and the cheek, in the direction of the articulation; the integuments were then freely slit up between them to the lobe of the ear; another incision was then carried from the infra-orbital ridge across the centre of the first incision, down to the angle of the lower jaw. It was here necessary to tie some branches of the facial artery, which bled rather freely. The flaps of the crucial incision were then reflected which fully exposed the external and irregular lobulated surface of the tumour, and afforded, also, the opportunity of tracing its base and attachments. The base of the tumour was found to occupy the palatine and maxillary portion of the upper jaw, and in its extensive growth its head had been forced down and attached to the ridge of the lower jaw, nearly as far as the symphysis, extending along the whole of the alveolar border nearly in a horizontal line from the mental foramen to the condyloid process, the whole of which portion was discovered to be either absorbed or in a state of caries from the long-continued pressure of the tumour. In fact, the tumour had so worked its way across the lower jaw, both inwards and outwards, that it was found buried in its substance, and, consequently, absorption of its body had been going on for some time, on both sides of the bone. The substance of the tumour was next separated by the knife and fingers, from its base and adhesions; this occupied a considerable time in consequence of its various situations, as it had penetrated in every direction where it could find access. When this was effected, an extensive irregular surface of bone was found in a state of caries, extending, in the upper jaw, from the pharynx across the palate to the malar bone. Not the least vestige of the thin walls of the antrum remained. Fortunately the floor-

of the orbit was left uninjured. With the assistance of Liston's bone cutter, small saws, &c. every portion of diseased bone was taken away that could be safely removed, and the general surface scraped, as carefully as possible, with the knife, it being intended, finally to apply the actual cautery over the whole plane of the diseased bone. Having accomplished this tedious and difficult part of the operation, ample room was found for amputating the lower jaw at the articulation; caries having extended, as before stated, from near the symphysis along the whole of the upper margin to the joint. This extensive line of bone was then sawed off, except the condyloid process, which was afterwards easily disarticulated, and removed with Liston's bone cutter, having first divided the fore part of its capsule, and also the temporal muscle from the coronoid process. This important and generally intricate part of the operation was facilitated by the previous removal of all the teeth and alveolar processes.

During the operation, no alarming hæmorrhage occurred, and after the branches of the facial artery had been secured, but little interruption was experienced from loss of blood."

Mr. Hetling was induced by the gentleman around him not to use the actual cautery, an omission which he afterwards regretted. The flaps of the cheek were brought into apposition by three sutures. On the fourth day the external wound had united. In a fortnight she walked about the ward convalescent—in a month, she masticated almost as well as usual with the other side of the mouth—and in three weeks after this (April 5th) she was dismissed quite restored to a healthy appearance. She was directed to return to the Infirmary, if any appearance of the disease should occur.

On examination of the tumor, its lobulated shape had been mostly destroyed, in consequence of considerable portions having been necessarily torn apart by the finger during the operation. Its substance throughout possessed the common homogeneous structure of medullary matter, being com-

posed of irregular masses inclosed and separated from each other, more or less completely, by thin membranous septa, bearing, in colour and consistence, a near resemblance to brain. On cutting it into slices, a few blood-vessels were divided, from the orifices of which oozed small portions of blood. In fact, it possessed all those anatomical appearances usually characterising medullary sarcoma, with which every practical surgeon is familiar.

Mr. Hetling offers many interesting observations on the case before us, and on the great confusion that prevails respecting the nomenclature and the classification of morbid growths from bone. He expresses his opinion, as many other surgeons have done, that the term osteo-sarcoma is a bad one, and agrees with Mr. Lawrence, and indeed with most scientific surgeons, in the idea, that tumors of bone should be named from their specific characters, and not in this vague and indefinite fashion. But passing over this portion of Mr. Hetling's paper, which, though good, presents no feature of novelty, we may notice his description of the disease as it affects the jaw.

"The term osteo-sarcoma of the jaw," he observes, "is employed by most authors to designate a morbid product, the distinctive character of which consists, more or less, in its resemblance to brain, fat, &c. It is true that the species of tumour which passes under this designation is sometimes found to consist of other materials either more or less hard, pulpy, or soft, such as fibro-cellular, fibro-cartilaginous matter, coagulated blood, serum, &c.; but these varied substances are generally to be found rather as intermixed with the original medullary structure of the tumor, than essentially belonging to it; and may be more properly considered as superadded, or converted materials, arising from occasional inflammation excited in the parts, after the tumour has been formed, than as composing its original and primary formation. I therefore conceive that under the term osteo-sarcoma, according to the present nosology of all English practical surgeons who have recorded

cases of this nature, are included all those depositions which pass under the common epithets of osteo-sarcoma, cancer of the alveolar membrane, soft cancer, medullary exostosis, fungus medullaris, medullary sarcoma, medullary cancer, encephaloid, cerebriiform, fibro-cellular, fibro-cartilaginous formations, &c. &c. These malignant productions admit of almost endless modifications."

"From this representation, and under our present state of knowledge, osteo-sarcoma may perhaps be advantageously separated into two great divisions; the first to be considered as accidental from a local external cause; the other as arising independently of the direct influence of any local cause, but owing to some great change in the system, which influences the important functions of secretion, and deposition, as constituting what is termed an idiopathic disease. These again may be subdivided into the hard, or fibrous, fibro-cartilaginous, fibro-cellular; and into the softer, or medullary, pulpy, and fungus medullaris, &c. &c. Nothing is more difficult than to trace the origin and cause, or to estimate the kind or the extent of the changes which take place in most of the varieties of tumours; changes which are often scarcely perceived, while they are making considerable progress."

We think there can be no doubt that great differences exist in the physical characters and the quantum of malignancy of tumors arising from bone, and we think also that as little doubt can be experienced respecting the difficulty that attends the diagnosis of these varieties of morbid growth, and the power they possess of mutual convertibility. We have seen a fibro-cellular morbid growth arising from the lower extremity of the femur, succeeded by genuine medullary tubercles in the lungs. Some of the growths from the superior or inferior maxillary bone approach very closely to, and others recede almost as widely from the characters of medullary sarcoma. In proportion as they do approach that formidable type of malignant growths, the chances of success from their removal diminish, and the surgeon is less justified in recommend-

ing his patient to submit to a cruel, because useless operation. An accurate study of the anatomy of these morbid growths from bone, and a careful investigation of their respective symptoms are therefore indispensable on the part of the surgeon.

The following is the general description presented by Mr. Hetling.

"In general, the origin of osteo-sarcoma of the jaw, may be traced to unsubdued or mismanaged local inflammation, supervening upon a scrofulous disposition, from whatever cause produced, whether cold, a blow, or mechanical injury to the jaw or teeth, stumps, &c. or other sources of excitement, which occasion the inflammation to extend to the medullary membrane, periosteum, or the internal and cellular structure of the bones of the face. It may attack any of the tissues of the body, but the vascular periosteum that lines the thin walls of the antrum maxillare and the alveolar depressions of both jaws, appears to have the greatest disposition to generate this disease, as it is generally found invested throughout with that fine membrane. The palate bones which form part of the roof of the mouth, the floor and side of the nostrils, the floor of the orbit, are also liable to this disease; but, in most instances within my observation, these parts become involved in this disease, owing to its spreading by consent of parts, and its contaminating presence in the alveolar membrane, or the antrum. Its growth may be either slow or rapid; it attacks all ages, but chiefly occurs from infancy to forty years of age. Both sexes are liable to it. Its growth is not generally attended with severe pain, unless where it happens to press upon a nerve, or is closely confined within the structure of bone, exciting inflammation and ulceration of that tissue, and thus producing caries. The pain is therefore uncertain and inconstant; sometimes severe, at other times scarcely perceptible, but never of that incessant lancinating, stinging, burning, darting kind which is common to cancer. The neighbouring glands are generally unaffected. Excavation of the bone takes place in proportion as

the internal formation of the tumour increases, and excites absorption, first of its cancellated, and ultimately of its more solid osseous structure. Every thing seems to give way to this growth; and the destruction it occasions is immediately supplied by its own development. At its commencement, this malignant growth is bound by the parietes of the bone, which at length yield to absorption from unnatural pressure, and then the tumour, becoming freed from its confinement, spreads in the least resisting direction: this is exemplified in the above case, by the lobulated protrusion at the mouth. The anatomical character and composition of the tumor is of various degrees of consistence and structure. But the principal pathognomonic appearance which this morbid product presents, is, in general, its resemblance to brain, both anatomically and chemically. This appearance is, however, modified, as in all other tumours, according to the locality of its seat or tissue, and the latent predisposition of the patient. This may be said to be its generic character; but graduated deviations occur both in structure, consistence and colour. In some instances, the consistence of the mass is fatty, soft and brainy, or fibro-cellular. In its more advanced stage, the lobes of the tumour sometimes burst, and send out an excrescence or fungus that sprouts more or less exuberantly; the teeth loosen, and fall out occasionally; a fetid, bloody discharge flows from the mouth sometimes attended with frequent hæmorrhage. Hence in this stage it has sometimes been denominated, and confounded with, fungus hæmatodes; but this bleeding, in general, is only occasioned by ulceration and rupture of some of the vessels that nourish and perambulate its substance. I do not deny that fungus hæmatodes may supervene upon this as well as in any other class of tumours; but I wish to guard against the conclusion, that every tumour that bleeds is to be considered a case of fungus hæmatodes, which is a disease of peculiar organization of vessels.

This is the single or simple description of osteo-sarcoma, but, like every

other morbid growth, it may occasionally exhibit, as supervening diseases, the production of carcinoma, melanosis, and fungus hæmatodes, in the same organ or tissue, and in the same diseased mass."

Mr. Hetling's remarks on the diagnosis of osteo-sarcomatous growths may, we think, be omitted. He takes true scirrhus, and points out the general and familiar differences between it and osteo-sarcoma. But he need not have raised this man of straw. No one confounds scirrhus and osteo-sarcoma the real difficulty lies in separating the latter from medullary sarcoma.—We fear that too often there is no separation—that frequently they are one and the same disease. There are indeed cases in which the general characters of the tumor, its very slow progress, and the condition of the patient, proclaims its fibro-cellular nature. But these are rather the exceptions than the rule—and even in these cases, flattering as they appear, the characters of the most inveterate malignancy are not unfrequently developed, and operations are followed by the appearance of unequivocal malignant growths in other portions of the body. The surgeon in his diagnosis must be guided by the circumstances of the case before him, and no general rule can compensate for the want of experience and of judgment on his part.

Mr. Hetling occupies himself with the consideration of the propriety, or otherwise, of securing the common carotid artery previously to removing the morbid growth. The influence of facts, and the force of reasoning, seem equally to convince him that the application of a ligature on the artery in question is in general unnecessary and injurious. We perfectly agree with Mr. H. The expedient is a clumsy, inefficient, and dangerous one, and few cases can occur, in which a bold and judicious surgeon would be tempted to resort to it. The best plan is to secure the vessels that are wounded, and only to tie the common or external carotid in case of imperious necessity. Mr. Hetling cites a number of cases, and enters on rather an elaborate investigation of the ques-

tion. We shall merely introduce his conclusions.

"This comprehensive anatomical and surgical survey of cases and facts, leads, it is presumed to the important conclusion, that tying the primary carotid artery is to be considered as unadvisable, as a preliminary step, in the removal of tumours about the head, neck, and face; and that such a proceeding is only to be recommended as positively necessary in attempting the cure of aneurism of either of its trunks.

This deduction is evidently at variance with the prevailing practice amongst several of the first surgeons of the present day, and, in consequence of the influence of their opinions and example, it has become nearly a common rule, whenever a tumour about the neck or face, of any magnitude, is to be extirpated, to proceed, unhesitatingly, in the first instance, to tie the common carotid artery. It is to guard against the prevalence of this, in some instances, inconsiderate, and too general practice of causing a patient to undergo two severe and dangerous operations, that so extensive an analysis of facts and surgical operations has been entered into; the real and sole design of which is to bring before the profession this, as it may be termed, double operation, on an extensive scale, and in all its bearings, and with the hope of obtaining and establishing, from a fuller and larger collection of facts and opinions, the most accurate principle of practice, with respect to the single or double operation."

The last point that engages the attention of our author is the plan of tying the principal artery going to supply a tumor, in order to procure the wasting of the latter. Mr. Hetling seems unsettled in his notions of the value of this method of proceeding. For our own parts, we doubt if much will be obtained from it. The cases in which we may fairly expect most are those of affections of the blood-vessels themselves. Yet the operation is of doubtful, very doubtful utility, even in aneurism by anastomosis.

With the following novissima verba of our author, we quit for the present

this interesting surgical subject. He thinks, from various facts and considerations, that he may safely be permitted to conclude:—

"1. That the preparatory operation of tying the primary carotid artery, is not only, as a general principle, unnecessary, but should be discountenanced as a proceeding of great, and, indeed, of far greater danger than the second operation; namely, that of removing the tumor, with the necessary portions of diseased bone, in cases of osteo-sarcoma of the jaw.

2. That there is every pathological reason for concluding that, in the great majority of cases that have been referred to, where the double operation has been performed, the result has proved fatally detrimental to the patient; and that this is solely to be attributed to the superadded operation of tying the common trunk.

3. That all the most extensive and extreme cases that have been *singly* operated upon, that is, without tying the carotid artery, have escaped a fatal hæmorrhage, and have, at least, recovered from the effects of the operation, even where the final event has been fatal.

4. That where the double operation has been performed, it has, in some instances been followed by consecutive hæmorrhage, of which the patient has died, thereby causing the fatal event which it was designed to avert.

Lastly not only is it proved that the removal of the tumour, with the diseased portions of bone, is an inferior and less dangerous operation than tying the carotid artery, but that it is an operation that may be extended to both jaws and bones of the face with less constitutional disturbance than has been apprehended; in fact, that almost the entire of one side of the bones of the face may be safely amputated, and the patient still be able to perform the functions of mastication and articulation, accompanied with but slight deformity."

We think that Mr. Hetling would do well to acquaint the profession with the termination of the case upon which his instructive pamphlet is erected.

GUY'S HOSPITAL.

RENAL DROPSY.

Mr. Anderson, lately clinical clerk at Guy's Hospital, read a paper before the Senior Physical Society of the same hospital on renal dropsy, which was afterwards inserted in our weekly contemporary, the Medical Gazette. It is now published in a separate form, and we purpose taking a short notice of it here. The author observes that dropsical effusions, connected with albuminous urine, are induced by several causes—by scarlatina—by abuse of mercury—gout—abuse of tonics—disorders of the digestive organs—but especially by exposure to cold and wet—and by inordinate ingurgitation of spirituous liquors. Most of the renal cases that came under his observation in the hospital proceeded from these latter causes.

"The sedative effects of cold and consequent deranged function of the skin, and the debility of constitution and irritation, induced by spirit-drinking, through the medium of the stomach, are well known. These causes predispose the kidney to suffer: this irritable organ sympathizing with the skin, a change in the renal secretion takes place, and, owing to a checked perspiration, a vicarious discharge in the kidneys is produced; they become functionally deranged, and albumen appears in the urine; deranged function leads to disorganization; serum is effused first in the cellular membrane of the face, feet, and ankles; then gradually extending upwards to the thighs and abdomen; and the aching pain in the loins, the severe throbbing and lancinating pain in the head, and apoplectic tendency; the hard pulse, dry unperspirable skin, and albuminous, dingy, and sometimes bloody urine, fully characterize and establish a true and exquisite case of renal anasarca."

Mr. A. then proceeds to detail the case which forms the basis of his paper. Fred. Crown, aged 47, a stout and well-formed man, was admitted, Dec. 3d, 1834, under the care of Dr. Bright. He stated that he had been

ill for six months—and had been subject to rheumatism for some years. He attributed his present illness to an attack of rheumatism. For four months he had laboured under anasarca, appearing first in the face and ankles, and afterwards extending to various parts of the body. He was an intemperate man, and much exposed to atmospheric vicissitudes. The most prominent symptoms now were—pallid and sallow countenance—dull pearly eyes—eyelids œdematous—lower extremities anasarca, as also the scrotum—no ascites—lancinating pains in the head—oppression at the epigastrium—pain in the region of the kidney—palpitation and dyspnoea on using the least exertion—action of the heart laboured, and somewhat indistinct—pulse 104—tongue dry—skin unperspirable—urine of a pale straw colour, coagulable by nitric acid and heat—specific gravity 1.015—gouty and rheumatic pains in the hands.

DIARY.

"R. Vin. Ant. ℥xx. ex Jul. Ammonia Acetatis, ʒj. sexta quaque hora."

R. Pil. scillæ c. Hyd. gr. x. omni nocte.

December 4th.—Pains very much increased; pulse 100, with some jerk.

Mittatur sanguis e. brachio ad ʒij. Applicetur Cataplasma lini lumbis bis in die. Omittantur Pilulæ. Pergat Mistura.

5. Blood drawn slightly buffed; pain in the loins relieved; that in the head increased; bowels rather confined.

C. C. nuchæ, ad ʒx. R. Ol. ricini, ʒvj. statim.

6th. Going on more favourably; symptomatic pains better; gout and rheumatism troublesome; urine rendered only opalescent by heat; very coagulable, however, by nitric acid.

Pergat.

11th. Pains in head and loins much increased; dyspnoea very severe; skin dry; pulse quick and hard, with some

jerk; urine about natural in quantity, acid, and very coagulable before boiling. Mr. Stocker saw him, and ordered the following:—

R. Pil. Camb. comp. \bar{c} Cal. $\bar{a}\bar{a}$ gr. iij. statim. C. C. lateri dextro, ad \mathfrak{xiij} .

12th. Pains rather relieved; skin dry; pulse incompressible; rheumatic pains more severe. Dr. Bright ordered the following:—

R. Tr. Camp. comp. \mathfrak{zss} . \bar{c} Vin. colchici, \mathfrak{mxx} . et Liq. ammon. acet. \mathfrak{zss} . ex Mist. Camph. \mathfrak{zj} . ter die.

R. Hyd. submur. gr. j. sextâ quâque horâ. Admov. Emp. cantharidis sterno.

15th. Pain in loins increased; dyspnoea great; tongue dry; skin hot; pulse strong; urine very coagulable, but rather diminished in quantity; bowels rather confined; feels nauseated from the medicine.

R. Mist. Magn. \bar{c} Mag. sulph. \mathfrak{zjss} ; pro re nata sum.

R. Sp. æth. nit. \mathfrak{zss} . \bar{c} Liq. ammon. acet. \mathfrak{zss} . ex Mist. camph. \mathfrak{zj} . ter die.

To this latter, Mr. Stocker added on the following day.

Acet. scillæ et Tr. Hyoscyami, $\bar{a}\bar{a}$ \mathfrak{zss} .

22d. Has been a little improving up to the present time; but to-day the symptoms have recurred with their usual violence; great soreness of the loins complained of, and pain extending down the groin to the scrotum, with slight retraction of the testicle; also, a soreness and dryness in the throat, affecting deglutition, and causing a cough: these feelings probably owing to œdema of the glottis. Right hand puffy and œdematous; great thirst and heat of skin; tongue dry; pulse quick and incompressible; bowels regular; urine of the same appearance, acid and coagulable.—Pergat.

27th. Œdema of upper extremities, and particularly of the right hand, very much increased; pain in the throat,

and difficulty of deglutition, very severe.

Admov. Emp. cantharidis gutturi.

R. Pil. Scillæ comp. gr. v. ter die.

R. Liq. ammon. acet. \mathfrak{zss} . ex Mist. camph. j. ter die.

30th. Cough very troublesome; expectorates some viscid mucus, stained with blood; throat very sore; œdema of right hand increased; urine in good quantity, and very coagulable.

Pergat.

Jan. 5th, 1835. Pain in the head has continued very severe; breathing rather easier; skin dry; tongue coated; pulse quick; slight difficulty in passing his urine, which is of the same character and appearance.

R. Mag. sulph. \mathfrak{zss} . \bar{c} Vin. ipecac. $\mathfrak{m v}$. ex Inf. gent. co. et Inf. rosæ co. $\bar{a}\bar{a}$ \mathfrak{zvj} . sextâ quâque horâ. Omittantur alia medicamenta.

He continued during the next week rather to improve, though the throat was very sore and the urine very coagulable. A few days afterwards (the day preceding his death), he was observed by Dr. Bright to be better in his general health; but, towards evening his manner of speaking seemed rather singular and unusual; his breathing became more oppressed during the night, and he would not answer when spoken to. These symptoms and appearances continued to increase during the next morning, when, about half-past 11, a. m. he suddenly went off into a kind of apoplectic fit; his breathing became stertorous, eyes protruded, and pupils contracted; he foamed at the mouth, had convulsive startings, and the face was of a yellowish tinge.

He was ordered to be cupped behind the ears, a blister to be applied to the shaved scalp, and one grain of calomel to be taken every four hours.

He rallied, but had four more attacks of the same character, and a last one at 3 o'clock, when I was with him. The pupils were then dilated; the breathing was stertorous, and at long intervals;

the face and hands were bedewed with a cold, clammy perspiration; and in a quarter of an hour he died.

An inspection took place twenty-two hours after death. For the following minute and interesting account of the post-mortem appearances I am indebted to Mr. Sibson:—

There was a general state of anasarca present all over the body, penis, scrotum, upper and lower extremities. On cutting into the cavity of the abdomen, which was exceedingly tumid and tense, upwards of a gallon of clear, slightly yellow fluid escaped. Liver appeared to be remarkably healthy; gall-bladder nearly filled with dark greenish bile. Spleen small; numerous white opaque spots on its surface; substance healthy; Pancreas rather small; healthy. The small intestines were rather blanched on their surface; their appearance gave rise to the idea of their being invested with a false membrane, from which, however, they were quite free. The stomach: towards the cardiac extremity and along the greater and less curvature, the mucous membrane was soft and easily separated from the middle coat. The mucous membrane of the pyloric extremity, for two or three inches from the orifice, was hard and granular; the pylorus itself was nearly half an inch in thickness; dense and white in its structure. The duodenum, for two or three inches at its commencement, had its mucous membrane hard and minutely granular. The rest of the small and the large intestines appeared perfectly natural. The left kidney was of little more than half the usual size, slightly lobulated on the surface, and of a much firmer texture than natural. The investing cellular membrane adhered pretty firmly to the proper tunic, below which were seen eight or nine cysts about the size of a pea, but varying a little in magnitude, and filled with clear fluid. One cyst of the same size was opaque. The proper tunic was readily separated from the surface of the kidney, which was covered with minute white granulations, of the size of small pins' heads; they were clearly contrasted with the light brown colour of the cortical tex-

ture. There were one or two white spots, about half the size of a silver penny, near the entrance of the vessels. On cutting into the kidney, its substance was found to be hard, and similarly granulated to the surface in its cortical part. One or two white spots were seen on the tubular substance; and the cortical part was exceedingly narrow, the tubular structure appearing to be of rather more than its natural dimension. The infundibula and pelvis presented nothing remarkable. The vessels of the right kidney were injected; the veins with blue, the arteries with red size. The veins presented numerous stellæ on the surface. The arterial injection shewed itself in numerous small packets in the cortical substance; but the whole of the tubular, and greater portion of the cortical, part remained uninjected. The right kidney was similar in every respect to the left. The bladder was filled with urine.—Thorax: the cavity of the pericardium contained about half a pint of pretty clear straw-coloured serum. The pericardium itself presented nothing remarkable. Heart: the cavity of the left ventricle was about four times its usual size: it was firmly contracted, and presented very great hypertrophy, the walls being about three-fourths of an inch in thickness. The mitral valve and semilunar valves of the aorta were quite healthy. The calibre of the aorta was nearly double its usual size. The right ventricle was considerably dilated, and its walls were thinner than natural. The right lung was free of pleuritic adhesions; it was crepitant throughout, and natural. The left lung was considerably congested and oedematous, especially at the posterior part; it was crepitant throughout. The pleura pulmonalis, on the left side, was universally adherent to the pleura costalis. The cavity of the pleura contained about a pint of straw-coloured fluid.—Head: there was very considerable sub-arachnoid effusion on the surface of both hemispheres and at the base of the brain. The arachnoid presented small and slight opacities in numerous points. The pia matter was readily separated from the convolutions, and from

their surface a thin pellicle of cineritious matter could be easily peeled off. The lateral ventricles were distended with about two ounces and a half of clear fluid. The carotids were at points opaque, and semi-cartilaginous.

On cutting into the knee-joints, they were each found to contain about an ounce and a half of semi-opaque synovia, mixed with loose flakes of a white matter, having a gritty feel. The articular surfaces of the cartilages of the femur, tibia, and patella in both joints, were covered with a white gritty substance, and the synovial membrane had imbedded in it, at various points, masses of a calcareous concretion, the largest of which was about an inch in length, and half an inch in thickness. The cartilages were of nearly double their usual thickness, much less firm in their texture than natural, and of a brownish colour. The elbow-joints contained a similar secretion; but the surface of the shoulder-joints was quite smooth, as also the phalangeal articulation of the right great toe.*

A portion of the effused fluid from the different cavities was analysed by Dr. Barlow, who has been kind enough to favour me with an account of the process:—

‘An aqueous extract was obtained from each of the fluids, and from this extract an alcoholic one was procured, absolute alcohol being used for the latter purpose: all the evaporations were conducted at a temperature not exceeding 200° F. Of each extract a syrup was made, by the addition of a few drops of distilled water; and to each of these syrups were added a few drops of strong nitric acid. The syrup from the effused fluid of the brain, as also that of the abdomen, yielded within two hours a considerable crop of foliaceous pearly crystals, of an arborescent form. That from the pericardium, as also that from the pleuræ, yielded a very small crop of crystals, after a much longer time.

* “Preparations of the injected kidney and diseased joints are carefully put up, and preserved in the museum of the hospital.”

Dr. Barlow has strong reasons for believing that these crystals were nitrate of urea.”

Mr. Anderson selects a good resumé of the opinions of modern medical men respecting the pathology of the disease. The testimony of Dr. Bright is, perhaps, the best. He observes, that he has never yet examined the body of a patient dying of dropsy, attended with coagulable urine, in whom obvious derangement of structure was not detected in the kidney. The testimony of Drs. Blackall, Tweedie, Darwall, and others, is not very dissimilar. The heart is very frequently found to be affected organically. The case which we published last quarter of Mr. Ward, in the City, is a striking illustration. This connexion throws light on the apoplectic tendency of cardiac and renal diseases.

“With regard to the treatment,—this must be directed with a view to restore the healthy function of the kidney, and to guard against any inflammatory affection, or apoplectic seizure, that may and does arise. That it is often unsuccessful, is but too true. We must however remember that the coagulable state of the urine may exist long before the anasarca shews itself: the patient’s attention is not arrested until this latter affection occurs; and when at length our remedies are administered, the kidney is far advanced in disease. Does it not, therefore, behove every practitioner to examine carefully, in every suspicious case, the state of the urinary secretion? General and local depletion, and a strict antiphlogistic regimen, are the principal indications of cure; for (as Dr. Bright observes) there is reason to believe that a state of great congestion, perhaps an actual process of slow inflammation, exists in various internal organs, and particularly in the kidneys, where it probably lays the foundation for their future disorganization. Hydragogue cathartics act well—as jalap, elaterium, &c.; but we must be cautious not to purge too much, for there is a fear of abrasion of the mucous membrane of the intestines; perhaps also a danger of exciting or increasing inflammatory action in the

kidney. Digitalis may be employed, with caution. Supertartrate of potash, from its gently purgative and diuretic property, is of great service; but all stimulating irritating diuretics are to be avoided, and we must act gently on the skin by saline diaphoretics. The loins should be surrounded with a large linseed poultice, which acts as a fomentation to the part, and will be found a very soothing application. Milk diet is the best. Tonics are indicated by the debility occasionally present; and, in the more chronic forms, Dr. Bright is inclined to think they may be of benefit. Dr. Blackall also speaks of the use of tonic remedies. The occasional alkaline property of the urine in confirmed renal disease, in connexion with the *absence* of albumen, as before alluded to, would seem to indicate the employment of an alkaline remedy. Dr. Bright, with this view, tried the liq. potassæ in one case, but not with much apparent benefit. The *uva ursi* and bismuth also have been tried. In the case related, this plan of treatment, to a certain extent, was followed but with how little success the result shews; indeed, when frequently occurring, or when long established, this disease appears incurable, and palliative, and not active, remedies must be employed; such a deep-rooted foundation does there appear laid for it in the broken-down, debilitated habits in which it occurs."

This paper is creditable to Mr. Anderson, and the subject is of the deepest importance to the medical practitioner.

NORTH LONDON HOSPITAL.

EMPLOYMENT OF KREOSOTE FOR THE PREVENTION OF SICKNESS.

The employment of specifics is tolerably ancient; the disposition to believe in them is as prevalent as ancient. But some gentlemen have a larger swallow than others. Like the ostrich, they eat all and digest all, for every fresh stone is swallowed as readily as its predecessor

was. We might exhibit a catalogue of twenty drugs or more, that, within the last two or three years, have successively appeared on the medical horizon, and been hailed as a wonder-working remedy. Whatever the medicine, it always effects miracles on its first appearance; yet, oddly enough, in the course of a few months, we find it laid by, and its virtues inherited by some successor soon to experience a similar oblivion.

Kreosote is now the rage. We dare say it is an excellent remedy; but we dare say, also, that two years hence its name will scarcely be breathed. We shall not enumerate all its valuable qualities here, but, imitating Mr. John Taylor, the apothecary of the North London Hospital, we shall simply chronicle its powers of arresting sickness.

Mr. Taylor has published nineteen cases,* in which kreosote was given to allay sickness. We shall mention the affection for which it was exhibited in each.

- Case 1.—Vomiting from colica pictorum.
- Case 2.—Vomiting after living in a newly-painted room.
- Case 3.—Vomiting and severe spasmodic pain in the lower part of the abdomen, accompanied with constipation.
- Case 4.—Constipation. Vomiting after croton oil.
- Case 5.—Vomiting and colicky pain in the abdomen.
- Case 6.—Vomiting after colica pictorum.
- Case 7.—Vomiting with hysteria.
- Case 8.—Ditto ditto.
- Case 9.—Vomiting with dropsy.
- Case 10.—Vomiting, with a disease that nobody understood.
- Case 11.—Vomiting, with the diarrhoea of phthisis.
- Case 12.—Vomiting, with incipient phthisis.
- Case 13.—Ascites and anasarca.
- Case 14.—Inflammatory neuralgia.
- Case 15.—Dropsy.

* Lancet, Aug. 15th, 1835.

Case 16.—Universal dropsy.

Case. 17.—Aneurism of the abdominal aorta.

Case 18.—Hypertrophy of the heart, with dropsy.

Case 18.—Inflammatory anasarca.

In eighteen out of these nineteen cases the kreosote succeeded. The diseases present a copious category. The cautions to be regarded in the exhibition of the remedy are thus given by Mr. Taylor; first, it should never be administered when there is any gastric inflammation. Secondly, the dose should be carefully regulated. We should begin with one or two drops, dissolved in an oz. of distilled water, by the aid of a little mucilage. Thirdly, thrice daily is usually a sufficiently frequent repetition of the remedy, though sometimes it ought to be given at short intervals to keep the stomach completely under its influence.

We hope, (we can scarcely add that we expect (that the favourable anticipations of Mr. Taylor will be perfectly fulfilled.

CLINICAL REPORT ON DIABETES.*

Dr. Carbutt, in the volume which has already supplied some matter for the Clinical department of this Journal, has made some remarks upon diabetes, and related some cases of that obstinate disease, which are not unworthy of attention.

After noticing the various names which it has received, and the discovery, by Dr. Willis, of the presence of sugar in diabetic urine. Dr. Carbutt enquires whether such a malady as idiopathic diabetes insipidus exists.

"The question now presents itself. Are there two species of diabetes, the *mellitus* and the *insipidus*, or is there only one, the *mellitus*? Dr. Young and Dr. Mason Good consider the *diabetes insipidus* as altogether a different disease; and so it is in one of its symptoms, the absence of honey or sugar

from the urine, but in every other symptom the two diseases so nearly resemble each other that they may perhaps not improperly, be considered as two species of one genus, or two varieties of one species. In speaking of John Wright's case, I mentioned that Cullen had expressed great doubts as to the existence of *diabetes insipidus* as an idiopathic disease, but that he says, 'among many cases of *diabetes mellitus*, he had observed one of *diabetes insipidus*.' Now, as for the existence of *diabetes insipidus*, as, properly speaking, an idiopathic disease, it is what I cannot take upon me to pronounce. I believe it is always symptomatic of *gastro-enteritis*, or of *gastro-enterocolitis*. Whether *diabetes mellitus* be not equally the result of *gastro-enteritis*, I cannot positively undertake to declare. I have not yet made a sufficient number of observations; but my belief certainly leans that way.

Thus we see that Dr. Carbutt supposes that *gastro-enteritis* is the cause of diabetes. The exact *quo modo* of this causation we shall presently perceive.

The urine of diabetes mellitus and of diabetes insipidus differs vastly in specific gravity. In the former this is very high—in the latter, it is low. Distilled water being taken at a specific gravity of 1000; the urine of *diabetes insipidus* is from 1001 to 1006: natural healthy urine is, according to circumstances, from 1005 to 1020: the urine of eleven male patients not affected with either dropsy or diabetes was taken at five o'clock in the morning, and mixed in equal quantities; the specific gravity was found to be 1017: the urine of seven female patients not affected with either dropsy or diabetes was taken at the same hour and mixed in the same manner; the specific gravity was found to be 1015. The specific gravity of the urine of the gentleman who took the above, and who laboured under no disease, was found to be at the same hour in the morning, 1013: the urine of *diabetes mellitus* is from 1025 to 1050. The sugar which the last kind of urine contains is from a tenth to a seventh part in weight.

* Dr. Carbutt's Clinical Reports, 8vo.

The origin of this vast amount of sugar occupies the attention of the lecturer. He shews that the vegetable substances, sugar, honey, manna, starch, and gum are identical not only in the nature, but even in the proportions of their component parts, not only in their qualitative, but in their quantitative analysis also. Mr. Donovan, Professor of Chemistry to the Society of Apothecaries in Ireland, has given an analysis of starch and sugar, computed at the mean of the results obtained separately by Berzelius and MM. Gay-Lussac and Thenard. The two analyses of starch and their mean is thus set down:—

	Gay-Lussac Berzelius. & Thenard.		Mean.
Carbon . .	43.481 . .	43.55 . . qu. pr.	43.51
Oxygen . .	39.455 . .	49.68 . . " "	49.57
Hydrogen	7.064 . .	6.77 . . " "	6.92
	100.	100.	100.

The same operations upon sugar supply results astonishingly similar.

	Gay-Lussac Berzelius. & Thenard.		Mean.
Carbon . .	44.200 . .	42.47 . . qu. pr.	43.34
Oxygen . .	49.015 . .	50.63 . . " "	49.82
Hydrogen	6.785 . .	6.90 . . " "	6.84
	100.	100.	100.

On these analyses, Mr. Donovan observes:—

The result of these statements is, that starch and sugar are composed of precisely the same ingredients; that the only discoverable difference is a slight disagreement in the relative quantities, and that this is exceedingly trivial. By comparison of the two means, the following are the differences: one hundred grains of sugar contain about one seventh of a grain less carbon, about three eighths of a grain more of oxygen, and two ninths of a grain more of hydrogen, than are contained in one hundred grains of starch. These are trifling differences; and, without reference to atomic considerations, it will immediately strike the inquirer that differences by far greater than these frequently occur in the analyses of the same body executed by different

chemists or by the same chemist at different times; and, in illustration, I adduce the analyses of sugar by the chemists already quoted, wherein the quantity of carbon as stated by Berzelius, is very nearly two grains more than what is stated by Gay-Lussac and Thenard. In short, we may conclude that analysis has not been hitherto able to detect any difference of composition between starch and sugar; and we may admit that, in both, the ingredients are the same in *quality* and *quantity*.

‘A person who contrasts their strikingly different properties; who considers that starch is one of the most insoluble bodies, at least in cold water, and sugar the most soluble; that sugar is the sweetest of all substances, and starch the most tasteless; will naturally inquire how are these facts to be reconciled; and if the composition is the same in both substances, why are not the substances identical?’

‘The question is natural: at least, it would have been natural and necessary some time ago, when it was supposed that similarity of ingredients and of proportions should produce similarity of qualities. Modern discoveries have proved that this is a mistake. It is now known that, beside quality and quantity of ingredients, the peculiar mode of combination of them is to be taken into account; and, although we know, in fact nothing about the modes of combination in which bodies exist, yet chemists have been, in a manner, compelled into this mode of explanation by the impossibility of explaining it otherwise in the present state of knowledge. In the case of starch and sugar, therefore, we know that the ingredients are the same; we may infer that the relative quantities of them are also the same; but, to assign a reason for the difference of properties, we say that they are differently combined, without pretending to say whether the difference is a closer approximation of particles, so as to expose them more effectually to each other's modifying powers: or whether it depends on some other cause. Considerations of relative specific gravities give us no information on the subject.

‘Be this as it may, one would be induced to conclude that similarity of composition would give origin to a great facility of converting one substance into the other; and this is just what we find to be the case in practice.’”

Gum arabic analysed by Gay-Lussac and Thenard, and by Berzelius was found, according to Dr. Henry, to consist of

Carbon.	42,23. . . .	41,906
Oxygen	50,84. . . .	51,306
Hydrogen	6,93. . . .	6,788
	100	100.”*

So that we see, to use the words of Mr. Brande and to fall back on the preceding tables for confirmation of their truth, the components of sugar differ little in their relative proportions from those of gum and starch, while the latter substance is convertible both into sugar and gum. Mr. Daubeny asserts farther, that manna enjoys a similar composition, and we are thus brought back to the original position that sugar, honey, manna, starch and gum arabic are identical, or nearly identical in the quality and quantity of their component parts. Gay-Lussac and Thenard lay down three laws, as expressions of the principal facts on this head.

“If the oxygen and hydrogen exist in the exact proportion necessary to form water, the vegetable substance is neither acid nor resinous, but it is sugar, manna, honey, starch, gum, lignin, or some such body.

If the oxygen be to the hydrogen in a proportion greater than is necessary to form water, the substance is always oil, resin, wax, alcohol, ether, &c.”

Thus, as Dr. Carbutt remarks, sugar, starch, gum, &c. may be considered as composed of carbon and water only: vegetable acids may be considered as composed of carbon, water, and oxygen; wax, oils, resins, alcohol, ether, &c., may be considered as constituted of carbon, water, and hydrogen.

* “Dr. Henry’s Elements of Experimental Chemistry. 7th Edition, 1815. Vol. 2nd. P. 188.”

It was supposed by some that sugar was formed in the digestive organs, and might be detected in the blood. But Dr. Wollaston found that the serum of the blood does not contain a thirtieth part of the sugar which is found in an equal quantity of urine. Vauquelin and Segalas found that there was not an atom of sugar in the blood of a diabetic patient whose urine contained one-seventh part of sugar. Mr. Halliday, ingenious chemist, and teacher of chemistry at the Mechanics’ Institution, examined, for Dr. Carbutt, the serum of the blood of a patient labouring under diabetes mellitus, and found that it presented no indication of the presence of either starch or sugar.

We just hinted at Dr. Carbutt’s theory of the cause of diabetes; we may now present it in a well digested form. We have seen the identical, or, nearly identical composition of starch, serum, and sugar, substances which form the bulk of the vegetable food we eat.—Their convertibility is well-established, and this convertibility renders it in the opinion of our author, not at all improbable that, from an imperfect or a deficient assimilation having taken place in the stomach, the gum and starch are carried unchanged to the kidneys, and are there, by a morbid process, converted into sugar.

“I consider then,” he proceeds, “that sugar is formed in the kidneys of patients labouring under diabetes mellitus; and that its formation depends upon some slight change produced upon the starch and gum which are carried in an un-assimilated state to the kidneys. Now, although the detection of starch or vegetable mucilage in the serum of the blood would fully confirm the theory just laid down, yet its non-detection would be very far indeed from overthrowing the aforesaid theory. It has long been an opinion among the best physiologists, that there is a direct passage from the stomach to the kidneys; and it is a remarkable fact that substances which have not been formed in the kidneys have been detected in the urine, and not in the blood. For instance, I gave to William Grimshaw, a diabetic patient of mine,

three grains of ferro-cyanate of potash, every hour for about twelve doses. I then took a portion of his urine and added to it a few drops of nitric acid; I then poured in a small quantity of a solution of sulphate of iron. The consequence was the production of a beautiful blue colour. Then abstracting about four ounces of blood, I made upon the serum a similar experiment to the one just related, without the production of any blue tint whatever; but upon adding a little of the solution of ferro-cyanate of potash, a vivid blue tint was produced. I immediately repeated the experiment upon his urine, and with the same success as before."

There can be, we apprehend, no question that, in some way or other, the sugar must come from the blood. The kidney is an excreting organ—that is clear enough. It is pretty clear also, that the blood is the pabulum of the urinary excretion. A short cut from the stomach to the kidney has never been shewn, though frequently conjectured, and not being discoverable, cannot be fairly or philosophically assumed. So far as evidence and probabilities go, the venous system is the channel of communication, and the general circulation must consequently be involved. It is therefore singular, supposing Dr. Carbott's theory to be correct, that if gum and starch conveyed unassimilated from the stomach, be the substances from which the diabetic sugar is produced those substances should not be distinguishable in the blood. Certainly the experiment mentioned by Dr. Carbott appears to render this singular circumstance an argument of inconsiderable force, and we remain in a state of uncertainty and confusion. Yet if carbon and water be the elements of sugar, those elements are always existent in the blood, whether starch or gum be conveyed immediately from the stomach or not.

There is this objection to the idea that the sugar of diabetes arises from substances of vegetable origin, that such sugar continues to be voided by patients who have long submitted to an absolute restriction to the use of animal food. It is true that, in some cases, the pro-

hibition of vegetable aliment appears to have effected the cure of the disease, but it is true also, that in the vast majority of cases in which this plan has been enforced, it has completely failed.

We have yet the pathology of the complaint to settle.

"Upon opening the bodies of those who have died of diabetes there have been found, on the one hand, all the marks of a chronic gastro-enteritis, on the other hand, a complete hypertrophy of the kidneys."

Dr. Carbott should have added a third hand to the pathological symbol—on the other hand, he should have said, there has been found—nothing at all. We have examined some cases of the disease, and in two or three instances we really could discover no lesion on which even a sanguine pathologist could lay his finger. Our author, however, is rather confident. He continues—

"With regard to the proximate cause, or the essence of diabetes, I am disposed to agree with M. Dezeimeris,* and the more so, as I had already delivered the same opinion to you in this room, in the case of John Wright, before I had even heard of the opinion of M. Dezeimeris. The opinion is this, that the proximate or essential cause of diabetes is an irritation of the kidneys. This irritation is seldom primitive; it is most commonly only a consequence of gastro-enteritis, more especially chronic gastro-enteritis. In the course of this last mentioned disease, there comes on an excessive thirst; the patient drinks a great deal; he voids urine in proportion. This state becomes chronic. The activity of the kidneys is increased at the expense of the other excretory organs; and thus the kidneys throw out from the animal economy a quantity of fluid which must be incessantly renewed; hereby the thirst is again increased, and a circle of diseased action, thirst and diuresis, or rather hyperuresis, is established and maintained, even after the gastro-enteritis with which the disease commenced has been removed.

* *Mémoires de la Société médicale d'émulation.* Tome 9e.

It has been objected to this theory, that on the opening of some patients who have died of diabetes, no marks of gastro-enteritis have been discovered; and also that many patients labour under gastro-enteritis, without having shewn any symptoms of diabetes.

To these objections I have to answer; that comparatively few instances of *post-mortem* examinations of persons who have died of diabetes have taken place; that, until lately, it has not been much the custom to examine the mucous membrane of the alimentary canal, after death, in any disease, and still less in diabetes, in which disease no injury of the mucous membrane of the alimentary canal was suspected; that, in those cases in which the alimentary canal was examined, and found comparatively healthy, if any such have been, the disease might have begun with a true gastro-enteritis, which, having established the circle of thirst and hyperuresis, might subside from the operation of the vast quantity of diluting fluids taken in, and leave the thirst and hyperuresis to go on with their former energy. Lastly, to the objection that many patients labour under gastro-enteritis without having shewn any symptoms of diabetes, I can only conjecture that this may occur from the circumstance that the kidneys are not in every case alike disposed to take upon themselves the action of hypertrophy; but why they are not in every case alike disposed to take upon themselves this action is, I fancy, among those secrets of nature which we shall never be able to develope. We know not, I say in reference to this last objection, why sometimes gastro-enteritis produces headache, sometimes synochal fever, sometimes vomiting, sometimes purging, sometimes costiveness, sometimes cholera, sometimes phthisis, sometimes diabetes, sometimes both phthisis and diabetes. These are things which it is our business to study, and, if possible, discover."

We will not say that we feel very certain of the soundness of Dr. Carbutt's opinions, with respect to the existence of gastro-enteritis in diabetes. We certainly have witnessed cases of

the malady, in which, so far as our memory serves us, no symptoms of such a complication were presented. But examination of the bodies of the dead is the only way to decide the question. Such examination ought to be made, and to be made with care.

We agree with Dr. Carbutt, in his estimation of the prognosis of the disease—it is certainly bad upon the whole. In the majority of cases, a cure is *not* effected.

Dr. Carbutt runs over the various plans that have, at various times been proposed or reported to cure diabetes. Dr. Rollo's animal-food diet holds, of course, the first place. It has had a long run.

"It has been reported, it really is not worth while to say where, that two cases of diabetes mellitus were cured by calcined magnesia, the one in a week, the other in a fortnight.

It is also reported, and it is equally of little importance to say where, that the diabetes mellitus has been cured by the phosphate of soda; in two cases likewise.

The celebrated Pinel, in his *Nosographie Philosophique*, says, 'Dans un cas de diabète causé par des chagrins profonds, et parvenu déjà au dernier degré, un malade, à qui je donnais des soins l'année passée a été guéri en sejourant à la campagne, en se livrant à un exercice régulier, en sortant de son abattement, et en insistant autant sur le régime végétal que sur toute autre substance.'""*

Opium next passes in review. Our author holds it cheap, for he believes he does not go beyond the truth when he says that, in his part of the world at least, the opium usually cures the complaint by killing the patient.

Bleeding was recommended by Dr. Watt, of Glasgow, and has been had recourse to by others. Dr. Carbutt considers this the most rational plan of all. He supposes some one to ask him his own mode of treatment. He is diffident in disclosing it, but it is this.

"Now, in the first place, if the pa-

* Pinel: *Nosographie Philosophique*. Tome 2nd. Paragr. ccxix.

tient's strength will admit of it, I would draw blood from the arm; I would apply leeches to the epigastrium; I would apply cupping-glasses over the kidneys; I would order farinaceous and mucilaginous diet, with barley-water, rice-water, or milk and water to drink; I would give the patient the *hydrargyrum cum cretâ*, and the *pulvis ipecacuanhæ compositus* in large doses; I would place the patient in a vapour bath, a sulphur bath, or a hot bath, or both, every day; I would order flannel to be worn next the skin; I would keep the patient, for the most part, in bed. If the bowels were costive, I would open them by means of castor oil. If diarrhœa existed, I would apply leeches to the belly, or to the anus, and give *laudanum* in chalk-mixture."

But Dr. Carbutt candidly owns his small anticipations of success in any case, and his absolute scepticism of the possibility of a cure, when the disorganization of the stomach or of the kidneys has arrived at a certain extent.

On the whole this is a candid and a sensible clinical discourse. When such are delivered at provincial hospitals, it augurs well for the state and for the prospects of medical science in this country.

We may now take a glance at the reported cases. They are twelve in number, three being instances of diabetes insipidus, and the remaining nine examples of the diabetes mellitus. We will first present an instance of the latter, cured—or, at least, benefited so as to be considered cured.

Case. Francis Isdale, a farmer, married, aged 51 years, says the first accession of his disorder took place twelve months ago. He was then much exposed to the vicissitudes of the weather, and frequently got wet feet. He lived on very low diet, and suffered under depression of spirits. The first symptoms were intolerable thirst, much sweating at night, urine copious, very dry tongue, nauseous taste in his mouth, appetite pretty good, bowels costive, only one motion in two or three days, much flatus in the bowels, restless nights disturbed by dreams, occasional

pain in the pit of the stomach, with a gnawing and sense of sinking before meals, pain in the right side and shoulder increased on inspiration, bilious tinge of the skin and conjunctiva, urine high-coloured, and feces clay-coloured, pain in the region of the kidneys.

All these symptoms subsided, some months ago, after three weeks' medical treatment, by Mr. Edward Lacy, surgeon in King-street, and he was well until five weeks ago, when he became affected in a similar manner. *His father died of this complaint.*

On his admission, the tongue was moist, much loaded with a white fur, the papillæ raised. He has a very nauseous taste, as of rotten eggs, in his mouth. His saliva tastes sweet. He has extreme thirst, which is best assuaged by cold water. Appetite is not so good. No vomiting or pain at the stomach. Bowels have hitherto been costive, but to-day he had two loose motions. He is much troubled with flatus. Pain on pressure in the right hypochondrium and occasionally in the shoulder. Obtuse pain in the region of the kidneys, increased by pressure. No pain in the limbs. Spirits depressed. Pulse 68, feeble. Urine is very copious, and has a sweet taste. One pint of it produced five drachms and two scruples of saccharine extract. It contains no urea."

The treatment adopted by Dr. Carbutt was confinement to bed—light diet—vapour or sulphur-baths every night—the abstraction, at four times, of fifty-six ounces of blood from the arm—five applications of leeches to the epigastrium—purgation—and the exhibition of ten grains of Dover's powder four times daily. In two months from the time of his admission, he was dismissed cured.

A table is appended for the purpose of exhibiting the weekly weight of the patient, the daily quantity of fluid that he drank, the daily quantity of urine that he voided, and its specific gravity from day to day. The following circumstances will shew the great alteration that occurred.

On the 18th of September, the weight of the patient was 200 1-2 lb; he drank

18 pints—he voided of urine, 20 pints—and its specific gravity was 1025. On the 17th of October, he weighed 190 lb.—drank five pints—voided, of urine, 4 pints—and its specific gravity was 1011. Two or three months after quitting the hospital, the patient still passed only four pints of urine in the day.

Other cases were not so successful. The next case we shall select, for the purpose of exhibiting the results of an examination after death.

Case.—Oct. 10th, 1833. Henrietta Wilson, in the 40th year of her age, a soldier's wife, says she has been ill nine months. The disease came on with intense thirst, the urine greatly increased in quantity, frequent vomiting, much languor and debility, purging, appetite remarkably keen. The languor and debility have increased, so that she has been lately quite unfit to do any thing. Says her habits have always been regular and temperate, and she knows of no cause to which she can attribute her complaint except the injury her bowels sustained from her having taken violent purgative medicines, to which she had accustomed herself every spring and fall of the year. On her admission, she had the tongue thickly coated particularly at the root and in the centre, with a brownish fur; it was at the tip and edges very red. She has a very nauseous taste in her mouth. Her saliva tastes sweet. The skin is dry and rough, never moist. Appetite is at present less keen than before. She feels very sick and faint, and a sinking in her stomach as if she were going to die. She does not vomit now. She has an intolerable thirst, and makes an excessive quantity of urine, which, she says, has a sweet taste. She has a troublesome cough at night, and expectorates a quantity of very nauseous matter. Some pain on the left side of her chest on respiration and on coughing. Considerable pain on pressure over the epigastrium and right hypochondrium. Says she cannot lie comfortably on the left side. Sleep is much disturbed by terrifying dreams, as of danger of falling from some pre-

cipice, or of being drowned. Bowels at present are costive, but they always have been loose on her taking opening physic; says she feels best when her bowels are confined. Complains of much feebleness and languor, occasional pain in her limbs, as the calves of her legs, knees, arms, &c. Pulse 112, very small and feeble. One pint of her urine contains, of saccharine extract, 370 grains. It apparently contains no urea.

We need not particularise the treatment, as the patient sank under gastric and pulmonary symptoms, and died on the 18th.

Autopsy, 22 Hours after Death. The mucous coat of the stomach was inflamed at various points. The mucous coat of the duodenum, jejunum, ileum, and colon was also strongly marked by inflammation, as well as discoloured in many parts. There were no appearances of ulceration, except something like incipient ulcers in the duodenum.

The right kidney was considerably enlarged, or, as it may be termed, *hypertrophised*. The left kidney was nearly without substance, and presented an appearance of complete *atrophy*. The ureters of both sides were preternaturally enlarged.

The uterus was tuberculated. The liver presented an unhealthy mottled appearance.

On cutting into the chest, there were strong marks of pleuritis on the left side, such as adhesions of the pleura, with lymph and pus observed on the surface of the lung. The upper lobe of the left lung contained a very large vomica; the posterior portion was hepatized. No apparent disease in the right cavity.

One of the cases was that of a boy, six years and three months old. The child only weighed 35 1-2 pounds, and he passed daily above 27 pounds of urine, one pint of which was found to contain 624 grains of saccharine extract. An extraordinary case! As may readily be supposed, the result of the treatment was not fortunate.

In the instance of a factory youth, aged 17, affected with the diabetes insipidus, the sulphur and vapour-bath,

with the compound powder of ipecacuan, leeches to the stomach, and castor oil when necessary, proved quite successful.

The only other case which we shall notice is that of a labourer aged 64, affected with the diabetes insipidus. On admission the quantity of urine voided daily was nine pints, of the sp. gr. of 1006 to water at 1000. He had passed as much as twenty-eight or thirty in the twenty-four hours. The patient died, and for pathology's sake we allude to the case.

"Autopsy, twenty-four hours after death.

3d. Upon opening the abdomen, the stomach externally presented near the cardiac orifice, the appearance of perforation of its coats. Internally, the mucous membrane seemed much inflamed, and there was a large ulcer which penetrated through all the coats. The inner coat also presented several small ulcers. The parietes of the stomach were much thinner than natural. The pylorus was very thick and inflamed.

In the duodenum was a larger ulcer, with several smaller ones.

There were numerous ulcers throughout the small intestines, but they were particularly obvious and large in the latter portion of the ileum, where it terminates in the caput cæcum coli; in this spot they were very numerous. The large intestines were also much inflamed and ulcerated. In the lower part of the rectum the mucous membrane was much thickened, and had the appearance of dark inflammation. Ulcers were also observed in this portion.

The kidneys seemed diseased, particularly the left one, which was larger than natural, much congested, and had a mottled granulated appearance internally with something like cysts, which might be enlarged infundibula.

There was a scrofulous-looking abscess under the left pectoralis muscle, not communicating with the interior of the thorax. The second rib, upon which this abscess was situated, was carious.

There were numerous and strong adhesions of the pleuræ on both sides.

The lungs, when cut into appeared healthy.

The liver appeared healthy."

We think this lecture will repay the reader. It presents a very fair and judicious account of a disease, which, unfortunately, we do not understand, and of treatment which, unhappily, is usually unavailing.

ST. MARYLEBONE INFIRMARY.

We observe that Dr. Clendinning, the able and zealous physician to the Marylebone Infirmary, has published a statistical report of the diseases observed in that institution between the 22d of May and the 24th of July, 1835. We think we need not remind our readers of our anxious and repeated efforts to induce the medical officers of charitable institutions to publish clinical reports. We have been among the first, if not the very first—we certainly have been the most persevering in making this call upon our brethren. Some have and some have not responded to it. We have little doubt that before a very long period elapses, a systematic series of clinical reports will be presented. The signs of the times in this respect are evident. For our own parts, we shall forward, as far as we are able, the attempts of those who display so highly praiseworthy a spirit as Dr. Clendinning of the Marylebone Infirmary, and Dr. Macleod of St George's Hospital.

We would suggest the combination of statistical reports, that is, summaries of facts, and individual cases. For the purposes of general utility, we should say that statistic records, and collections of cases calculated to display the general laws of disease or treatment, are preferable to insulated instances of rare complaints. The latter are too often chosen, because they excite curiosity and interest. The accomplished surgeon or physician is too apt to measure the attainments, the appetites, and wants of the mass of his profession by his own. Things familiar to him he too readily concludes to be equally familiar to all, and hence the

prevalence of transcendental pathological papers in our journals and transactions. One sound and universal induction is worth much more, in an useful point of view, than the most extraordinary fact, or the most imposing theory. Such inductions should be the aim of those who write for the real instruction of the public—of our clinical reporters. It is with facts that they have essentially to do, and their object should be, to transfer the experience of the ward to the report.

Dr. Clendinning apologises for the present imperfect condition of his tables. He regrets that he has not yet been able to procure sufficient materials for columns indicating ages, trades, birth-place, and so forth—all circumstances of interest, and some of consequence. We shall content ourselves with extracting the Table supplied by the worthy Doctor to the Medical Gazette, referring the reader for remarks on individual subjects to the pages of our contemporary.

"Table of the Diseases of Marylebone, as observed in the In and Out-door Practice of the St. Marylebone Infirmary from Friday, May 22, to July 24, 1835.

<i>Fevers.</i>		Male.	Female.
Gastro-enterite	1	5	
Variola	2	3	
Rubeola	14	8	
Scarlatina	3	1	
Febris infant. remitt. .	1	0	
Febris	30	30	
<i>Inflammations.</i>			
Cynanche	2	2	
Catarrhus	1	0	
Pneumonia	7	7	
Iritis	0	1	
Hydrocephalus	1	1	
Phlegmon	1	0	
Bronchitis, chron. .	0	1	
Hepatitis	0	1	
Meningitis	0	1	
Dysentery	0	1	
Bubo	0	1	
Encephalitis	2	2	
Gangrena penis	1	0	
Ophthalmia	25	2	
Inflam. pedis	1	1	
Febris puerperalis ..	0	1	
Bronchitis	9	9	
Erysipelas	0	1	
Hordeolum	0	1	
Erythema	0	1	
Pleuritis	3	7	
Peritonitis	2	1	
Rheumatismus	17	17	
Laryngitis	0	1	
Otitis	1	1	
Anthrax	1	0	
Inflam. bursæ	0	2	
Gastritis	0	1	
Abscessus	3	7	
Hernia humoralis ..	1	0	
Tumor faciei	1	0	
<i>Chronic Organic Diseases.</i>			
Phthisis	30	20	
Carcinoma	2	0	
Tabes	1	0	
Morb. chron. cerebri. .	1	1	
Morb. cordis	2	1	
Morb. chron. ventric. .	2	0	
Morb. chron. cordis ..	5	3	
<i>Diseases of Nervous System.</i>			
Apoplexia	3	8	
Neuralgia	0	1	
Delirium tremens ..	1	0	
Mania	11	8	
Cephalalgia	0	1	
Pertussis	3	1	
Ramolisement	0	1	
Epilepsia	2	1	
Paralysis	1	1	
<i>Discharges.</i>			
Hæmoptysis	2	2	
Hæmorrhag. uteri ..	0	2	
Diarrhœa	2	1	
Amenorrhœa	0	2	
Menorrhagia	0	1	
Hematemesis	0	2	
Leucorrhœa	0	1	
<i>Cutaneous Affections.</i>			
Psora	4	20	
Strophulus	1	0	
Eczema	0	1	
Eruptio syphilitica ..	0	1	

	Male.	Female.		Male.	Female.
Urticaria	2	0	Atrophia	2	0
Porrigio	10	10	Prolapsus ani	1	1
<i>Miscellaneous.</i>			Fractura costæ, &c ..	2	0
Fistula in ano	1	0	Syphilis	2	5
Vulnus	2	0	Ustio	0	1
Ulcus	9	9	Syncope	1	0
Asthenia	0	1	Hydrops	0	3
Contusio	3	4	Fistula lacrymalis ..	0	2
Hernia	2	1	Ebrietas	1	1
Icterus	1	0	Morb. spinæ	0	1
Concussio cerebri ..	1	0	Podagra	1	1
Pyrosis	0	1	Anasarca	0	2
Sequelæ partus	0	20	Aphthæ	0	1
Abortus	0	6	Obstipatio	0	2
Dyspepsia	1	3	Luxat. humer.	1	1
Tympanitis	0	2	Senectus	2	1
Incerta	7	7	Retentio placentæ ..	0	1
Colica pictonum .. .	2	0	Luxatio	1	0
			Aneurism poplit. ..	0	0

Table of Deaths occurring in the Wards of the St. Marylebone Infirmary, from May 22d, to July 24, 1835.

	Male.	Female.		Male.	Female.
Consumption	11	6	Convulsions	1	2
Inflammation of lungs,	2	2	Atrophy, and }	1	1
Concussion of brain ..	1	0	Marasmus mesenteric. }	0	1
Inflammation of brain,	2	2	Epilepsy	0	1
Cancer of liver	1	0	Chronic dysentery ..	0	3
————— womb .. .	0	1	Aneurism of aorta ..	0	1
————— breast .. .	0	1	Diseased brain	0	2
Apoplexy	1	2	Typhus	0	1
Croup	0	1	Puerperal fever	0	1
Ulcer of stomach .. .	0	1	Old age	0	1
Diseased heart	0	3	Dropsy	2	1
Asthma	0	3	Diseased stomach ..	1	0"

The number of deaths is greater on the female than the male side. It is much to be regretted that Dr. Clendinning has not obtained the ages of the patients, and that he has not distinguished the in and out patients of the institution. He promises future reports, and we hope he will be enabled to render these and other matters more distinct.

hernia in that volume of clinical facts, from which we have already freely culled cases which must ever be valuable, whatever theories prevail. We think we discover an increasing disposition on the part of hospital surgeons and physicians to render their stores of useful knowledge available to the mass of their professional brethren. This disposition we would anxiously encourage, and we have done our best at all times to promote it.

CLINICAL REPORT ON HERNIA.*

Dr. Macfarlane relates nine cases of

CASE 1. *Strangulated Scrotal Hernia—Intestine burst by the Taxis—Operation—Death.*

* Clinical Reports of the Glasgow Infirmary. By J. Macfarlane, M. D. 8vo.

J. P. æt. 39, admitted Feb. 19, 1827, at 7 p. m. He had been subject for twenty years to a reducible inguinal rup-

ture of the left side; and, during the last two years, a small portion of it remained irreducible, and prevented him from wearing a truss. The symptoms of strangulation had existed for ten hours; and, during a considerable part of that time a surgeon had made powerful and continued efforts to return the displaced parts. These produced at first a good deal of pain in the tumor; which, however, along with the vomiting, ceased for several hours, after he felt as if something had been pushed into the abdomen.

One of Dr. Macfarlane's colleagues employed the taxis rather forcibly for about ten minutes ineffectually. Cold was then applied to the tumor, and a colocynth enema exhibited. In about an hour after this, he was seen by Dr. Macfarlane.

The tumour was then about the size of the fist,—had a pyriform shape, an irregular surface, and was rather firm and doughy anteriorly, but smooth and elastic posteriorly,—the outer part being apparently omentum, behind which a fold of intestine was probably situated. The lower part of the scrotum was as large as a child's head, the swelling being chiefly confined to the left side. It was tense, smooth, and of a livid colour. The integuments were considerably thickened; and they crackled under the fingers, when firm pressure was applied, similar to what is observed from the effusion of fibrine around a sprained joint. There was also obscure fluctuation, apparently from a collection of fluid in the cavity of the scrotum. These appearances evidently depended on the effusion of blood both into the integuments and the interior of the scrotum, which was to be attributed to the forcible pressure employed previous to his admission. His pulse was 100 in the minute, the respiration slightly hurried, and the bowels obstructed; but there was no anxiety of countenance, and only slight pain in the belly; the vomiting had ceased, and, altogether, the symptoms were so mild that an operation was not immediately called for; yet it will be afterwards seen, that before this pe-

riod the injury was done to the bowel which led to a fatal result.

Dr. Macfarlane considered it improper to reapply the taxis, in consequence of the previous attempts, and of the swelling of the scrotum. At 1, a. m., the patient was much worse. No alvine evacuation had been procured; the abdominal pain was acute and diffused; he vomited every ten minutes; his pulse was 140, small and sharp; his breathing hurried, and his countenance sunk and anxious. The scrotum was now as large as a man's head, and nearly its whole surface was purple and discoloured.

At 4, p. m. the operation was performed. When the sac was opened, fully a pound and a half of dark-coloured blood escaped; a considerable quantity of which was pressed up from the depending part of the scrotum. The hernial tumor consisted of a large piece of omentum, which was covered with coagulated blood, and of nearly two feet of intestine. The omentum was contused and lacerated, and the protruded gut, which was afterwards found to be the ileon, was almost wholly separated from the mesentery. It contained several rents, which passed in a longitudinal direction; and into each of these openings two or three fingers could be introduced. There had been no escape of feculent matter, but the gut was flaccid, and of a deep purple colour; the discolouration depending not on gangrene, but on the extravasation of blood into the cavity of the bowel, and between its coats.

"Two strictures, about an inch separate, one at the outer, and the other at the inner ring were divided. I then attempted to return the uninjured parts of the bowel into the cavity of the abdomen; but after several attempts this was found impracticable. The impediment did not arise from the smallness of the hernial aperture, or from the presence of adhesions; but in consequence of the empty and relaxed state of the bowel, and the great distention of the parts within the abdomen, I found that although a small portion was pushed up before the finger, it was impossible

to prevent it from being instantly protruded.* From the dreadful condition of the parts in this unfortunate patient, I had no alternative, but either to allow the bowel to remain in the sac, covering it with a poultice or other emollient application, or to excise it. Had the patient survived the effects of the disease and operation, I have no doubt from the great injury which the bowel had sustained, and from the extensive destruction of its mesenteric attachments, that it would soon have become gangrenous, which termination would probably have been accelerated by the constant irritation to which so large a piece of intestine must have been exposed in an open wound. The only prospect of benefit from treatment, seemed to consist in procuring, as speedily as possible, a free feculent discharge, through an artificial anus: and as this could be effectually obtained only by dividing the gut as it emerged from the inguinal canal, I proceeded to excise the bowel; an operation, it must be acknowledged, of the most formidable kind, and only warrantable under the desperate circumstances I have attempted to describe.

From the vascular state of the small portion of the mesentery attached to the bowel, I found it necessary to pass a ligature around it to prevent hemorrhage; the gut was then divided in two places and removed. Both ends of the bowel were secured in the wound; they did not collapse but retained their natural calibre from thickening of the coats by previous inflammation. A piece of omentum nearly the size of the fist was also removed; after which

two stitches were inserted into the lower half of the wound, and simple dressing applied."

The patient was much exhausted after the operation, the vomiting was incessant, the abdomen became tympanic, and in seven hours he died.

As Dr. Macfarlane justly observes, it is impossible to furnish a more useful or impressive commentary on the danger of employing force in the reduction of a hernia than by the case now detailed. The disease was of twenty years' standing; the intestine was free, although the omentum was adhering to the sac; the inguinal ring was large; and every thing was in the most favourable state for the successful use of the taxis; nevertheless, it was productive, and that in the hands of a well-informed surgeon, of the most disastrous consequences; the omentum, intestine, and mesentery were torn, and an immense effusion of blood produced.

Even within these last few years, a sensible alteration has occurred in the practice of English surgeons. The taxis is now much less employed, and the operation is sooner had recourse to. Within the sphere of our own observation, the results have been gratifying in a high degree. The mortality of strangulated hernia is diminished, patients are spared many hours of barbarous, because unnecessary, surgical interference. Even so lately as ten years ago, a patient brought into a large London hospital, with strangulated hernia, was tolerably sure of undergoing a lengthened application of the taxis at the hands of the house-surgeon, of the surgeon to whom his case belonged, and of several, if not all the surgeon's colleagues. The taxis was used before the warm bath, in, and after it, and, if any thing approaching to a glimmer of hope appeared to remain, the taxis, after an interval, was again employed, perhaps with cold, perhaps as a pendant to a tobacco-glyster. The fatality of such cases was much greater than it now is. At present a moderate employment of the taxis, if ineffectual, and, generally speaking, a trial of it in

* "Boyer gives a case which occurred to Petit. Although the stricture was divided, and the gut found to be free of adhesions, it could not be returned. He was advised to cut off the part, but he allowed it to remain in the wound, and covered it with pledgets of linen; the greater part of it returned spontaneously into the abdomen, the wound healed, and a cure was accomplished."—*Traité des Malad. Chir.* tom. viii. p. 126.

the warm-bath, is usually succeeded at once by the performance of the operation. That operation is, *per se*, attended with so little danger, that its risk scarcely deserves consideration, and, altogether, we may look on its present period and mode of performance as a great improvement in the treatment of the disease.

There are some, even at present, who cling to the lengthened use of the taxis. They reason from a few cases. No doubt the operation, being early performed, is performed in some cases where it might, by patience and delay, be avoided. But the general results must determine the general value of a mode of treatment, and those general results are undoubtedly in favour of the early operation. If there are cases in which it may be dispensed with, those are exceptions, and must be received as such. The rational mode of giving an exception its proper weight is, not by rejecting the general rule, but by endeavouring strictly to appreciate the circumstances under which exceptions occur, and by recognizing them when they appear. In the instance of hernia, we are not to return to late operations, because early ones are now and then unnecessary; but we are carefully to study the symptoms, and observe the course of individual cases, and arrive, if we can arrive, at the power of distinguishing those, in whose favour the general principle of treatment may be waived.

It is obvious that general rules, in medicine, are necessarily rules of principle—their application constitutes the sum of the experience and the judgment of the surgeon or physician. In the case before us, the principle is this:—that an early operation is safer and more successful than a later one. In applying that principle, it is equally clear that, *cæteris paribus*, the greater the information of the surgeon the more likely he is to apply it aright—the less his information, the more likely he is to apply it awrong. The extension of the argument implies that, if the surgeon's knowledge be perfect, his application of the principle will be also perfect. Unfortunately, however, human

knowledge is not perfect, and we cannot expect that the application of any principle, especially in medicine, where the disturbing circumstances are so numerous shall be free from liability to error. It follows that, to diminish that liability, the way is, not to reject an useful rule, but to endeavour to ascertain the cases to which it does and does not apply. But to proceed.

Dr. Macfarlane observes that, in old herniæ, the gut sometimes becomes diseased, and, whether attenuated or thickened, it is generally softened. The taxis, in such cases, is particularly hazardous. As an instance of this, he relates the following case.

"In May, 1827, when walking along one of the public streets of this city, I was requested by a surgeon to accompany him into his shop, and examine a poor woman who had fainted a few minutes after the reduction of a strangulated crural hernia on the right side, which had annoyed her for more than twenty years. The tumour had been in a state of strangulation for about eight hours; but the symptoms were not urgent. After a gentle use of the taxis for five minutes, the hernia went up with the usual noise, and was almost immediately followed by syncope. On examination I found her skin covered with cold perspiration; the pulse rapid and feeble; and she complained of acute pain in the right inguinal region. She was immediately carried home, but continued to get worse. The pain became diffused; vomiting and hiccup occurred; the belly was tympanitic; and, without re-action taking place, she died in less than seven hours. I was present at the dissection, and found a lacerated opening in the middle of the ileon, which could admit three fingers. The intestine was softened and thickened, but not in a state of gangrene; and through this preternatural opening, the contents of the alimentary canal had escaped and excited peritonitis."

It is difficult, indeed it is impossible, to say what amount of force should be ventured on in the application of the taxis. Much must depend on the history of the case, the state of the parts

and the condition of the patient, and all must be determined by the judgment of the surgeon. It must certainly be better to do too little than too much.

Passing over a case in which the patient refused, for some time, to submit to the operation, and in which the application of cold was followed by erysipelas, we may stop to notice a case, in which a portion of the omentum was excised.

CASE.—*Strangulated Entero-Epiplote—Excision of a Portion of the Omentum—Cure.*

Mrs. M. æt. 58, had laboured under a strangulated crural hernia of the right side for forty-eight hours, on the 10th of December, 1826, when Dr. Macfarlane saw her. The tumor, about the size of half an orange, elastic and painful; the abdomen was tumid, tender on pressure, and the seat of frequent paroxysms of spasmodic pain; the countenance was flushed; the pulse 60 and sharp. After trying the taxis, &c. Dr. Macfarlane proceeded to perform the operation. The sac contained thickened omentum, and a small fold of dark-coloured intestine. The stricture was divided, and the intestine was easily returned; but, as the protruded omentum was diseased, it was cut off, the adhesions it had contracted to the neck of the sac were destroyed, and it was then replaced in the abdomen. The sac was greatly thickened, and so separated from the surrounding parts, probably by the efforts made to reduce the tumor, that Dr. Macfarlane thought proper to excise it. The patient had acute peritonitis, requiring copious bleeding, leeches to the abdomen, &c. and two days elapsed before the bowels were freely evacuated. After this, the unfavourable symptoms disappeared, the wound healed by the first intention, and in three weeks she was able to wear a truss.

The objections to excision of the omentum are, the liability to subsequent bleeding. The abdominal portion of the cut omentum may retract into the abdominal cavity, and furnish there a troublesome, or even serious hemorrhage. If the vessels are tied,

and the ends of the ligature cut short, the threads may give rise to peritoneal inflammation or to abscess. A case of this sort occurred to Mr. Earle. He excised a portion of omentum, and, having tied the vessels on the cut surface of the remainder, removed the ends of the ligatures. Some time afterwards, an abscess formed at the umbilicus and the ligature knots were discharged. The best plan when it is necessary to remove a part of the omentum, is to excise it, and to leave one end of the ligature long, as is done on stumps or other wounds. The knot can then be removed in due time. Some have recommended tying the portion of omentum, and allowing it to slough away. We have seen this done, and succeeded by abscess in the sac, and extensive suppuration in the neighbourhood.

The next case is curious on several accounts.

CASE.—*Strangulated Entero-Epiplote—Operation—Existence of a Mesenteric Hernia—Death.*

R. M. æt. 28, admitted Jan. 4th, 1827. The left side of the scrotum was occupied by a pyriform tumor; from the upper part of which, a hard, irregular well-defined cord, about two inches in length, was felt passing up, and entering the inguinal ring; it had more the feel of a thickened and enlarged cord, than of the neck of a hernial tumor. On grasping and raising up this band, however a more elastic part was felt below, where an impetus was recognized on coughing; and here the pain, on pressure, was intolerable. The tumor fluctuated distinctly at the anterior, inferior part of the scrotum; but the greater part of it was hard and irregular, and could not be distinguished from the testicle. Twelve years previously, a hernia had suddenly appeared in the left groin. It was easily reduced, and kept so by a truss, until five days prior to his admission. It then descended, whilst making a strong effort, and had resisted all attempts at its reduction. Dr. Macfarlane concluded that the cord-like substance so distinctly felt, was thickened omentum, behind which was probably a strangu-

lated fold of intestine. He urged an operation, but the patient refused to submit to it.

The symptoms grew worse, and had the characters that usually wait on strangulated intestine, in an advanced stage. When we mention stercoraceous vomiting, hiccup, tympanitis, and a pulse of 130, the rest may probably be guessed. On the evening of the 6th, he at last consented to the operation, and it was performed. The sac contained one ounce of dark-coloured, rather fetid fluid, and a large, livid, soft mass of omentum, apparently gangrenous, which was intimately adhering to a fold of intestine, three inches in length, lying at the posterior part. The gut, which was of a deep chocolate colour, but not actually gangrenous, had an opaque spot on its surface, apparently from a deposition of lymph. About one-half of the omentum was removed, the other half adhered to the bowel so intimately, as to render its excision impracticable. The stricture was divided, the adhesions of the omentum and intestine to the neck of the sac were destroyed by the finger, and the parts returned into the abdomen.

The symptoms were not materially relieved, and, at 9 p. m. of the 9th, he died, seventy hours after the operation.

Inspection. The small intestines were enormously distended, of a dark red colour, adhering to each other by recent lymph, and to the abdominal integuments on the left side of the pubes. The omentum which was tightly stretched over the intestines, and attached to the portion of gut which had been strangulated, was dark-coloured, and so soft as to yield readily to the fingers. There was no effusion into the abdomen, but the intestines were smeared in some places with brownish pus. The ileon was found to have passed deeply into the pelvis, through an opening in the mesentery. It had not contracted any preternatural adhesions, but it was evidently constricted and gangrenous, and was with difficulty drawn out from its unnatural position. The upper part of the same bowel had been included in the inguinal hernia;

it was doubled on itself, adhering, and in a state of gangrene.

The next case presents nothing of interest or consequence. The following is more worthy of attention. Before we enter on it, we are under the necessity of dissenting from a remark of Dr. Macfarlane's. He observes that it is but rarely that the omentum enters into the formation of a crural hernia. This does not agree with our own experience. It is true, that omentum is more frequently included in an inguinal than in a femoral hernia; but still it is far from uncommon in the latter. We remember many cases in which we have seen it.

CASE.—Strangulated Crural Entero-Epiplocele—Intestine included in an additional Sac of the Omentum.

"I was requested (says our author) by Mr. William Easton, surgeon in Calton, to visit Mrs. C. aged fifty-five, at nine o'clock, p. m. on the 31st Jan. 1832. She had been labouring for thirteen hours under the symptoms of a strangulated hernia. The tumour, which occupied the situation of the right crural opening, was about the size of a small hen's egg; it was tense, painful, and turned up over the outer surface of Poupert's ligament; there was also swelling, tension, and pain of the right side of the abdomen; vomiting and constipation. The pulse was slightly accelerated; the countenance anxious; and there was a good deal of prostration of strength. She had had a reducible crural hernia of the left side for many years, but had never observed a tumor in the right groin till that morning, when it suddenly protruded and became strangulated.

Having failed by a moderate use of the taxis, I immediately proceeded to the operation. On opening the sac, a small quantity of limpid serum escaped, and a considerable portion of omentum presented itself. This was not in its usual soft doughy state, but was of a globular shape, and had a tense elastic feel. On minute examination it was found, that either fluid, or probably a portion of intestine, was contained in-

a sac formed by the omentum. I therefore pinched it up with a pair of forceps, and made a cautious opening into it, when a considerable quantity of serum escaped; it was then laid open to the same extent as the peritoneal sac, and found to inclose a knuckle of dark-coloured intestine. The stricture was divided; the gut returned; the protruded omentum, which had contracted slight adhesions to the neck of the sac, was cut off; the bleeding from one of the vessels, was arrested by torsion; the adhesions were destroyed, and the rest of it returned; immediately after which more than an ounce of limpid serum escaped from the cavity of the abdomen. She speedily recovered."

It is not very uncommon to find the intestine involved, more or less, or concealed by omentum. We have seen several instances of this description, and, occasionally, some embarrassment in consequence. A recollection of their possibility is always proper, and frequently necessary, on the surgeon's part.

In the next case brought forward by Dr. Macfarlane no fluid existed in the sac; on dividing the stricture, which was very tight more than an ounce of straw-coloured fluid escaped from the abdomen. The Doctor observes, and very truly, that if there is little or no fluid in the sac, it is occasionally difficult to ascertain when the latter is really laid open. He has twice seen the fascia propria mistaken for the sac, and the gut returned into the abdomen with the sac unopened. Death was the result. It is generally better, when any doubt exists, to satisfy ourselves that the gut is really exposed, and the stricture divided, by drawing down the former in a slight degree. The great point, however, is to be sure of the division of the stricture, for the cases related by Mr. Key are sufficient to shew that, if that division has been properly effected, the sac may often be safely returned into the abdomen.

The next case presents no feature of consequence. The last is an example of the cure of artificial anus. With this we shall, therefore conclude the present series.

CASE. R. C. æt. 60, admitted Nov. 11th, 1831. He had had reducible scrotal hernia of the left side for thirty years, and of the right for twelve; there had also been, on the latter side a hydrocele for more than a year. This had been punctured about a fortnight before his admission, and the operation had given rise to inflammation and gangrene of the scrotum. The sloughing was very extensive on his admission. On the 22nd, Dr. Macfarlane found, on removing a loose portion of the slough, which evidently involved the septum scroti, that a small livid opening, on the inner side of the left hernial sac, was exposed, through which there was a copious discharge of thin feculent matter. It was now evident that the gangrene had extended to the intestine, and that an artificial anus was formed. Through this opening the whole of his stools were passed for nearly three weeks, when it completely closed, and the alvine matter resumed its natural course. The scrotum assumed a healthy granulating appearance, and had cicatrized fully two-thirds when the symptoms of diseased heart, under which he laboured, became more urgent, and general dropsy took place. He died on the 5th Jan. following.

On examination after death, the inguinal openings on both sides, readily admitted four fingers. Both sacs contained considerable portions of the small intestines, which were free of adhesions, and appeared to be healthy. The part of the gut in the left hernial tumor, in which the artificial anus had existed, could scarcely be distinguished. All that was discoverable was, that a small portion, about the size of a sixpence, was slightly thickened, irregular, and purple-coloured.

As Dr. Macfarlane observes, the peculiarity, in this instance, of cure of artificial anus, is the circumstance, that no adhesions of the bowel to the neighbouring parts took place.

ST. GEORGE'S HOSPITAL.

REPORT OF THE CASES TREATED FROM
JANUARY 1st TO JULY 1st, 1835.
By R. MACLEOD, M. D. &c.*

Dr. Macleod introduces his report with the following observations.

"It is frequently urged as a matter of reproach, against the physicians and surgeons of our hospitals, that they publish no reports of their practice; and some have not scrupled to assign motives for this silence far from creditable to the parties in question. I believe the true cause is to be found in that which I know has influenced myself;—I allude to the disinclination which men naturally feel to claim attention without having something which they deem of importance to communicate. My reason for stepping out of the beaten path, and following the example recently set in your journal by one of the physicians to the St. Marylebone Infirmary, is not from conceiving that I have any thing so valuable to offer, that the withholding it would be an *irreparable* injury to the public, but because I think the complaint above alluded to is not without some justice, and because I am of opinion that accurate returns of the number of patients labouring under particular diseases, and of the results—even did the reports contain nothing more—would soon become valuable in a statistical point of view."

We agree with Dr. Macleod in thinking that the accusations of a desire to monopolize knowledge, not unfrequently brought against hospital surgeons and physicians, are absurd. The number who can be influenced by such a feeling must be small indeed. But Dr. Macleod takes no notice of a motive, which is probably the most influential of all—we allude to indolence. Four out of five of the medical officers of our public institutions do not publish reports of their practice or their cases, simply because it is not an integral part of their duties, and it

is not volunteered. We trust that the example of Dr. Macleod, an active and able hospital physician, will stimulate others, who, perhaps, are not convinced of the necessity of exertion, to contribute their share to the advancement of the knowledge of particular facts, or statistical results. We congratulate the physicians of St. George's Hospital, on the opportunities afforded to them in its spacious wards, and we are sure the public will obtain much valuable information from that source.

The number of beds occupied in the hospital is now 300. The applications being much more numerous than the vacancies for applicants, the worst cases are, in consequence selected. This renders the ratio of mortality high, but affords proportionate facilities for the cultivation of pathological anatomy. In fact, the examinations of the dead are conducted so carefully and systematically at this hospital, that probably the pupil enjoys more advantages, in this respect at St. George's, than at any other institution. This, however, by the way. We shall merely notice the statistic portion of Dr. Macleod's communication.

"On the first of January, 1835, (he says), there were in the hospital under my care 30 patients. There have been admitted, 97. Total, 127.

Of these, there have been dis-	
posed of	101
Remained under treatment,	
July 1	26
Total	127

Those 'disposed of' are as follow;
viz :—

Discharged cured	59
———relieved	17
———complaints stati-	
onary	8
Transferred to Surgeon . .	3
Dead.	14
Total	101

The 14 deaths were produced by the following diseases —

* Med. Gaz. July 25, 1835.

Phthisis, common	2
——affecting chiefly the	
larynx	1
Suppuration of thoracic glands, .	1
Tuberculated peritoneum, with	
ascites	1
Malignant disease of stomach .	1
Tuberculated liver, with ascites, .	3
Encephaloid disease of liver .	1
Organic disease of the heart .	3
Apoplexy	1
—	—
	14"

We are next presented with a list of the cases of affection of the head, the respiratory organs, the heart, the fauces, and the abdominal viscera.

The diseases of the cerebral and nervous system are:—

Apoplexy, 2.—Cured 1; dead 1.
Epilepsy, 1.—Relieved, 1.
Hemiplegia, 1.—Relieved, 1.

SPINAL DISEASE.

Paraplegia, 1.—Under treatment, 1.

FUNCTIONAL NERVOUS DISEASES.

Hysteria, 2.—Cured, 2.

The diseases of the respiratory organs are:

Laryngitis, acute, 1.—Cured, 1.
Do. Chronic, 1.—Cured, 1.
Do. phthisical, 3.—Relieved, 1; dead, 1; under treatment, 1.
Bronchitis, acute, 3.—Cured, 1; dead, 2.
Do. Chronic, 1.—Cured, 1.
Pulmonitis, 3.—Cured, 3.
Phthisis, 4.—Relieved, 2; dead, 2.
Suppuration of the bronchial glands, 1.—Dead, 1.

The diseases of the heart are:—

Acute pericarditis, 1.—Cured, 1.
Chronic disease of the heart, 14.—Relieved, 8; dead, 3; under treatment, 3.

DISEASES OF FAUCES.

Cynanche tonsillaris, 1.—Cured, 1.
Syphilitic ulceration of the fauces, with eruptions, 2.—Cured 2.

DISEASES OF ABDOMINAL VISCERA.

Peritoneum, tuberculated, with dropsy, 1.—Dead, 1.

Do. chronic inflammation of, 1.—Cured, 1.

Stomach, anomalous *gurgling* of, 1.—Stationary, 1.

Do. scirrhus ulceration of, 1.—Dead, 1.

Do. supposed malignant disease of, 1.—Stationary, 1,*.

Bowels, obstipation of, 1.—Cured, 1.

Do. colica pictonum, 1.—Discharged for irregularity, 1.

Do. diarrhoea, 1.—Cured, 1.

Do. dysentery, 1.—Under treatment, 1.

Do. ulceration of (?) after fever, 1.—Cured, 1.

Liver, chronic disease of (tubercular), with ascites, 6.—Relieved, 2; under treatment, 1; dead, 3.

Do. encephaloid disease of, without ascites, 1.—Dead, 1.

Do. chronic inflammation of, 4.—Cured, 3; under treatment, 1.

Do. biliary obstruction—jaundice, 1.—Cured, 1.

Spleen, chronic enlargement of, 1.—Stationary, 1.

Abdominal tumors, nature not ascertained, 2.—Under treatment, 2.

The treatment of fever, so far as the cases go, is satisfactory in an eminent degree.

Fever, common continued, 6.—Cured, 6.

Do. intermittent—quotidian, 1.—Cured, 1.

Do. do. irregular, 1.—Cured, 1.

Dr. Macleod speaks highly of mercury in the management of continued fever. He thinks that that medicine, exhibited at the commencement of the disease, is as much a specific as bark in ague. In every one of the above instances, when the gums became affected, the febrile symptoms ceased.

Dr. Macleod relates the particulars of several interesting cases, in addition to the preceding statistical reports. For these, however, we must refer to our contemporary.

* Since dead. The patient left the hospital, to avoid having his body examined after death.

ROYAL INFIRMARY OF EDINBURGH.

CLINICAL REPORT FOR THE WINTER SESSION OF 1834-35. By J. SYME, Esq. Surgeon to the Royal Infirmary.

Mr. Syme, whose name we need scarcely introduce to our readers, has not merely commenced, (for he did that long ago,) but systematically pursues the plan of presenting clinical reports. We have little doubt that, ere long, we shall have a considerable body of valuable facts periodically and regularly presented to the public. This is as it should be. The objects of medical institutions are after all, the diffusion of useful medical knowledge, and that diffusion is strictly synonymous with the general diffusion of medical facts.

The present report extends to the length of twenty-seven pages in our old and valued Northern Contemporary. We can only, at present, select a few of the cases for notice.

Medullary Disease of the Eyeball.

Mr. Syme relates two cases, and we notice them in this brief paragraph for one purpose, and one only—to express a desire that the operation of excision of the eye-ball for medullary disease should be entirely abandoned. The operation is, we may almost say with perfect truth, invariably unsuccessful, and the sooner it is given up the better.

Injury of the Head—Secondary Symptoms—Matter under as well as over the Dura Mater.

We draw attention to this case, because it illustrates an important circumstance, the occurrence of matter beneath the dura mater, opposite the spot where it is found external to it.

James Swinton, aged 34, hackney-coachman, was admitted on the 7th of January, soon after being found lying insensible by the policeman on duty at the Calton Hill. It was ascertained that he had gone up to look for a London steam-boat which was expected, and finding that it had arrived, hastened down to get his coach ready for the passengers, when, the rocks being slip-

pery from frost, he had fallen about 16 feet, and lighted with his head on the stone steps at the foot. When brought to the hospital he was very restless and incoherent, as if intoxicated, which, however, he was not, though reported to be of irregular habits. There was a very large wound of the scalp, extending from the root of the nose to the vertex, the edges of which were very uneven and much lacerated. The bone was laid bare to the extent of several inches in length. Soon after admission he became composed and sensible. In the evening the pulse was 84, but the skin was hot, and he complained of great pain in the head. xxxvi . of blood were taken from the arm, and gr. v. of calomel, with xv. of *Pulv. Jalap.* given as a purgative.

Next day, though he was much better, it seemed proper to repeat the bleeding to the extent of xxvi .

On the third day his pulse was 104, and he complained much of headach. The tartrate of antimony was ordered in nauseating doses.

On the fourth day he was delirious and violent, so as to require the strait jacket. xxx of blood were taken.

On the fifth day he had not slept, and was very restless.

On the sixth day he was very noisy and unruly; passed his stools in bed, and seemed in a hopeless state.

On the seventh day he was more composed, so that the jacket was removed. He had slept a little towards the morning, pulse 96.

During the six following days he went on most favourably. He was sensible and cheerful. The sloughs separated from the scalp; great part of the exposed bone granulated; the pulse, tongue, and appetite were natural.

On the 14th day a great change had taken place. He complained of more pain in the head; the tongue was dry and brown; skin hot; pulse 100. He was bled to the extent of xx . with considerable relief; and resumed the solution of tartrate of antimony.

During the three succeeding days he had frequent severe rigors, and the wound assumed a dry glassy appearance. As there could be no doubt that

suppuration had now taken place within the cranium, while the integrity of the patient's sensorial and voluntary powers seemed to show, that the brain and its immediately investing membranes were not seriously injured, it was thought right to perforate the bone. This was done on the 17th day by means of the *trepan* which was set on the bare portion of the skull, about the anterior extremity of the sagittal suture. The bone was quite dead and perfectly dry throughout its whole thickness.—So soon as it was divided, a quantity of thin, extremely fetid pus, by computation at least $\frac{3}{4}$ ss gushed out.

During the three following days he had frequent rigors, and was occasionally incoherent. The pulse was very variable, ranging from 84 to 130. But his appearance was on the whole not unfavourable; he was quite sensible, and the wound looked well.

On the 21st day he became worse, passing his stools in bed; swallowing and articulating with difficulty; and suffering from convulsive twitching of the muscles, with hiccup. He died on the 22d day.

On dissection the dead portion of the bone was found defined by an ulcerated groove on the outer as well as inner surface of the skull. The *dura mater* was covered with puriform lymph for some distance beyond the dead portion of bone, and at one part was so soft and thin, that it scarcely bore the pressure of the forceps. Under the *dura mater*, and nearly to the same extent as the superjacent effusion, there was a similar deposition in the sub-arachnoid cellular texture. The other contents of the cranium were found in their usual condition."

This case is well detailed, but we think that the examination of the body after death was incomplete. We need not tell even our *unsurgical* readers now, that abscesses in the liver and the lungs are common in connexion with secondary suppuration within the cranium. The symptoms are the same, but the knowledge of the combination is important, because it leads us to expect less from an operation, and to look with more suspicion upon symptoms,

than otherwise we might be led to do. We recollect some well-marked cases of this description. A man had an injury of the head, which was succeeded by symptoms of suppuration on the *dura mater*. He was trepanned, and the matter was disclosed, if not discharged. But rigors continued, and he died. On examination matter was found beneath the *dura mater*, and deposits of matter existed in the lungs.

On the whole, we must look on the operation of trephining for suppuration within the cranium as, generally speaking, excessively unfortunate. We never saw a case in which it was successful. Mr. Pott relates a large number, but no one is now-a-days so lucky as was Mr. Pott. Mr. Syme's experience, we see, coincides with our remark.

This case, says he, has been selected from many very severe and some fatal injuries of the head, because it was the only one that has occurred for a long while, in which the internal suppuration was so seated and limited, as to afford any promise of advantage from the operation of *trepan*. And, had it not been for the unfortunate morbid action under the *dura mater*, there can be little doubt that the patient would have recovered.

In the latter supposition we know not if we can entirely agree with Mr. Syme. But that is too uncertain to be argued on.

The following case is interesting, as exhibiting the state of a fracture two months after the occurrence of the accident.

"*Simple Fracture of the Os Femoris—Reunion—Death at the end of Two Months—Dissection.* Susan Barr, aged 51, was admitted on the 2d of April in consequence of having sustained a fracture of the left thigh-bone, which she stated had happened the preceding evening from being thrown down by a man who ran against her while crossing the street. The injury having been ascertained to be seated in the upper third of the bone, the limb, properly supported by splints, was placed upon a double-inclined plane.

On the 15th she was suddenly seized

with sickness and vomiting, and then became extremely hot and restless, with dry brown tongue and quick pulse. In three or four days these unpleasant symptoms left her, and on the 20th of May the limb was found sufficiently firm to be freed from restraint. On the 27th she had a rigor and a return of her former symptoms, which continued with progressive aggravation until the 7th of June, when she died.

The fracture had evidently been comminuted. The broken surfaces remained quite *unconnected*, a soft bloody semi-fluid substance only lying between them. In the medullary canal there had been a deposition of osseous matter in a sort of granular state, and the external edges of the fracture were united by bridges of dense bone. In this case, then, the *provisional* callus of the French pathologists was nearly completed.

It is a remarkable fact in the history of pathology, that Duhamel's theory of the reunion of fractures, which was founded on an erroneous analogy between the formation of wood and that of bone, has proved to be much nearer the truth than that of Haller and his pupils who entertained correct opinions as to the formation and nourishment of bone. Duhamel supposed, that, in a case of fracture, the periosteum had its inner layer converted into bone, just as the inner layer of the bark of a graft is converted into wood, and that thus a connecting bridge was formed between the broken bones. When specimens were shown to him of the union extending through the medullary canal, he explained the appearance by alleging that the *internal* periosteum had suffered a similar change; and when his attention was called to sections of old united fractures, in which a compact mass of bone occupied the seat of the fracture, he was satisfied with supposing that the external and internal periosteum had united. Rude and crude, and ill-founded as this theory was, it approaches wonderfully near the enlightened views of Breschet and Dupuytren, who have been the first to explain satisfactorily the process by which the every-day accident of fracture is re-

paired. The reader is no doubt aware that the explanation formerly admitted, of an organizable substance effused from the broken bones into the space between them, and gradually hardened into bone, is quite untenable; and that the process of reunion truly consists, 1. in the formation of a capsule surrounding the fractured extremities by thickening and condensation of the neighbouring tissues; 2. the deposition of bone in this capsule, and in the medullary canal; 3. the growth of bone from the surrounding osseous surfaces until the cavity is completely obliterated. The second stage is generally so far completed in from three to six weeks, that the limb regains its rigidity sufficiently to resist any moderate force, and the cure is then said to be completed; but the real cure requires at least as many months. The case that has just been related affords a striking illustration and confirmation of this process; since, if it were not for the provisional callus or bridges of new bone connecting the external edges of the fracture, the bone would still be flexible, and, in fact, one of the halves is flexible from the section having been accidentally made so as to leave the bridge more on one side than the other."

With this case our now narrow limits compel us to conclude. We recommend the whole report to the philosophic lovers of facts.

SIR P. DUN'S AND MERCER'S HOSPITALS.

Dr. J. Osborne has lately published a paper on diseases of the stomach, in our Dublin Contemporary, from which we shall extract a few cases.

CASE 1. *Gastrodynia.*

"Ellen Maguire, aged 21, admitted into hospital, October 3d. *Pain in the region of the stomach, generally when it is empty; the pain is relieved by eating; sour eructations, and vomiting of sour fluid, attended with relief of the pain; catamenia absent four months; meat*

agrees best with her stomach; pulse natural. Those symptoms have lasted nearly three years.

Camphorated senna mixture ad effectum.

R. Nitrat. argenti, grana iv.
Aquæ distillat. ꝑviiij.
M. Sumt. ꝑss. omni hora.

7th. At first some nausea was experienced after taking the solution, which has ceased. The pain is diminished, and the vomiting has never occurred since.

10th. Bowels torpid, otherwise free from complaint.

R. Mass. pil. galbani. comp. ꝑi.
Extract. aloes aquos. ꝑss.
M. Ft. pil. xxiv. Sumt. iij. omni nocte.

Pain and vomiting not having recurred she was dismissed in a few days.

CASE 2. *Gastrodynia—Scirrhus.*

"Mr. P., aged 39, came under my care 24th February, 1833, with a pain in the epigastrium, not increased by pressure. Vomiting of watery acid fluid, to which he has been subject nearly nine years; *the vomiting eases and sometimes entirely removes the pain*; appetite good until within the last few days; food now mostly rejected; pulse seventy-four; tongue white, but moist; abdomen feels empty, and rather retracted; bowels habitually costive, has not been freed during the last three days; all the purgatives taken having been rejected by the stomach. He was placed under mercurial treatment, his mouth became sore, and a slight effect was produced upon his bowels. In consultation with an eminent practitioner of this city, since dead, several efforts were made to produce copious evacuations, but in vain. The pulse became more frequent, the stomach more irritable, and at length he could retain only cold water. In compliance with the anxious desire of his friends, and with the consent of Dr. Crampton, whose assistance was now obtained, we agreed that he should make a trial of fluid mercury. He took a pound weight,

being nearly an ounce by measure in my presence. He swallowed it in two deglutitions, and immediately gasped for breath in a state of great anxiety, then vomited, but none of the mercury came up. No effect on the bowels was produced, and in the vomiting which continued during the following days, the mercury appeared in minute globules, having caused no appreciable inconvenience while in the stomach. The matter vomited was on different occasions bloody, and of a fetid odour. During the last four days he would submit to no further remedies; all having proved ineffectual, either to cause action of the bowels, or ease from the vomiting. He gradually sank, and died on the 13th of March. On examination of the body, the pyloric end of the stomach was found above half an inch in thickness, which gradually diminished towards the cardiac extremity, where it entirely disappeared. At the lesser curvature, towards the pylorus, there was an ulcer about the size of half-a-crown, with jagged edges, which had perforated through the scirrhus mass in this part, and had reached the peritoneal membrane. The pylorus was so contracted, that an ordinary-sized quill could scarcely be passed through it. The interior of the stomach, at the pyloric half, was uneven from masses of scirrhus projecting into it; but except at the ulcer, the mucous membrane was in a state of integrity, being of a reddish purple colour. No emaciation had taken place until within the last three weeks, and, notwithstanding the enemata and other means used to move the bowels, there was a considerable quantity of fæces in the large intestines, but unaccompanied by air."

It is not a little curious that no remains of the quicksilver were found in the stomach or bowels.

Dr. O. relates some cases illustrating the insidious advances which the disease makes, "as long as the greater curvature remains in a healthy state." The following is one of these cases.

"Hugh Reilly, aged 77, died in Steven's Hospital, in October, 1832, with aneurism of the aorta, and imperfect closure of the aortic valves, bron-

chitis, and general dropsy. His appetite was remarkably good up to within a few days of his death, nor had he vomiting until this period, when it was generally brought on by coughing. He did not at any time after his admission refer either to the region of the liver or stomach, as the seat of pain. On examination after death, there was found, close to the cardiac orifice of the stomach, a cancerous ulcer, about the size of half-a-crown. It was raised above the level of the mucous membrane, the edges composed of a soft fungous mass, were irregular, inverted, and everted, the centre was depressed and hard, very irregular, and of a greyish colour. An interval of only one-third of an inch separated its edge from the cardiac orifice. The mucous membrane near the pylorus, and along the lesser curvature was very rough, softened, and presented a punctuated injection. The mesenteric glands were enlarged, hardened, and converted into scirrhus structure. The liver was not enlarged, but was studded throughout with scirrhus masses, varying in size from that of a pea to the largest walnut; their shape irregular, and those on the surface projecting far above it, with raised edges and depressed centres. Those were hard, white, and striated when cut into, presenting the appearances of a bad turnip. Some of them were of a creamy consistence. The gall-bladder was filled with black and very viscid bile. Kidneys quite healthy."

Several other illustrations are given, and many judicious observations are appended to them, for which we must refer to the Journal itself.

LOCK HOSPITAL.

NOTICE OF TWO CASES OF SYPHILITIC SORE IN THE URETHRA. By HENRY JAMES JOHNSON, ESQR.

The following are two examples of this rare affection. I say rare affection, because, though it is probable that venereal ulcerations occur now and then in

the urethra, beyond the sphere of vision, the evidence of their existence is too slight to permit much confidence to be placed in it. In the following cases that evidence was sufficient to produce conviction in my mind, and it probably will not appear altogether inconclusive to my readers.

The first case was that of an outpatient at the Lock Hospital. It is unfortunate that my notes of the case have been lost, but the following are the principal particulars.

Case 1. A young man, a mechanic, applied to me on account of a discharge from the urethra, pain in micturition, and painful erections at night. Without making a minute examination of the penis, a precaution, however, which, should always be adopted whenever a venereal patient presents himself, I looked upon the case as one of gonorrhoea and treated it accordingly. But it did not yield to the remedies prescribed, and it appeared peculiarly obstinate. Nearly three months had elapsed from the first appearance of the disorder, and discharge still existed, with painful erections at night. The pain was referred to a spot in the urethra, distant about an inch from the orifice. Here I could feel distinct induration. But other symptoms had now occurred, which directed my attention more particularly to the induration I have mentioned. The patient complained of sore-throat, and superficial yellowish ulceration was visible upon the tonsils. An eruption had also appeared upon the skin. It consisted of slight depositions in the cutis of a brownish red colour, desquamating freely. It was what may be called the syphilitic psoriasis. In order to ascertain as perfectly as possible the nature of the indurated spot in the urethra, which I suspected to be really a venereal ulcer, I separated the lips of the orifice as widely as possible, with a fine pair of dressing forceps, and was enabled to obtain a glimpse of the spot in question. It appeared to be distinctly ulcerated.

Under these circumstances, I did not hesitate to prescribe a course of mercury. The patient was ordered to take

the blue pill, and all local applications to the urethra were abandoned. Under this plan he rapidly improved, and ultimately he perfectly recovered. The discharge soon ceased, the induration subsided, the secondary symptoms disappeared, and in short, the patient appeared completely cured. Whether a subsequent return of the secondary symptoms took place, I am unable to determine, as I have not seen the patient since the period at which he was dismissed.

Case 2. A gentleman consulted me about the middle of August of the present year, on account of a complaint under which he had been labouring for four or five months. He said that he had been treated for gonorrhœa.

There was profuse purulent discharge from the urethra. On the right side of the orifice of the urethra was a distinct yellow ulceration, partly external, principally extending into the urethra. But this was not all. For two inches from the orifice the urethra felt hard, irregular and thickened, excessively painful upon pressure, and when pressed giving exit at the orifice to an increased quantity of discharge, slightly tinged with blood. On the breast and back was an eruption of pityriasis, yet attended with rather more thickening of the cutis than is usual in that cutaneous affection. On the abdomen were several scattered spots, exactly resembling the syphilitic psoriasis. I told the gentleman I was confident he had ulceration of the throat, with such a combination of the symptoms. He said that he did not believe he had any thing the matter there. I examined the throat and found each tonsil extensively ulcerated. The ulceration was of a yellowish colour, superficial, without much surrounding redness.

The history of the case was indistinct. The patient had been living uninterruptedly with a female friend, but he had also had connexion at intervals with other women. It appeared that he had been subject for some time to ulcerations on the glans. He had had what was considered the gonorrhœa for four or five months, or more. The

eruption on the skin had existed for two or three months also, but the spots of psoriasis had been of late occurrence. As he was not aware of the presence of ulceration in the throat, he was ignorant, of course, of the date of its occurrence.

Under these circumstances, I could not hesitate to believe that the patient laboured under syphilitic ulceration in the urethra. The eruption on the skin, the ulceration in the throat, the irregularity and tenderness of the urethra continuous with evident ulceration at the orifice, and finally the inutility of remedies directed for some time against the supposed gonorrhœa, appeared to form a chain of evidence strongly in favour of the syphilitic nature of the malady.

In a paper in a former number of this Journal, I directed attention to a very troublesome complication or consequence of gonorrhœa—chronic inflammation of the corpus spongiosum urethræ. In that affection the corpus spongiosum may be felt indurated, is tender to the touch, keeps up the discharge from the urethra, and sometimes gives rise to abscess in the cellular tissue of the penis. But in chronic inflammation of the corpus spongiosum, there are never, so far as I have seen, secondary affections of the throat or skin, nor is it attended with ulceration at the orifice of the urethra.

I prescribed a course of mercury for this gentleman—the application of mercurial ointment to the inferior surface of the penis—injections of dilute blackwash into the urethra—and the use of the tepid bath. At the date of this report (Sept. 1) but a short time has elapsed since this plan of treatment was commenced. Yet the ulceration at the orifice of the urethra has healed—the induration of the corpus spongiosum has diminished, the eruption is fading, and the ulceration of the throat has decreased. So far as they go, these results are favourable to the view I have taken of the case.

I have detailed these cases because they are facts which have happened under my own observation, not because they present any thing very rare or

extraordinary. Other surgeons have probably met with similar cases, which the publication of these may recal to their recollection. The practical point they are intended to enforce is, the necessity of making a careful examination of the state of the urethra in all obstinate cases of urethral discharge.

EDINBURGH EYE INFIRMARY.

REPORT OF THE EDINBURGH EYE INFIRMARY, FROM NOV. 20. 1834, TO MAY 25, 1835.*

This report is made by Mr. Watson, who, in January of the present year, published an abstract of the cases that occurred in the six months preceding November, 1834. In fact, the institution has only been in existence since July, 1834. The total number of cases admitted in the year has been 544. Those received between the 20th of November, 1834, and the 25th of May, 1835, have been 276. Of these, four have been admitted as in-patients; the rest were placed in the books as *out-patients*, some of whom were visited at their own dwellings. Many of the individuals were affected with diseases in both eyes, which, in some, were of a different nature; so that the number of cases of disease of the eye, admitted into the institution, was considerably

greater than the number of patients above stated. The number of patients affected with each disease were as follow :

Ophthalmia tarsi	27
Inversion of eyelids	2
Tumors of eyelids	9
Ulceration of eyelids	2
Ulceration of eyebrow	1
Painful nervous affection of eye, .	1
Paralysis of muscles of eye, . . .	5
Fistula Lacrymalis	5
Injuries of eyeball from foreign bodies	19
Inflammation of conjunctiva (acute and chronic)	75
Inflammation of conjunctiva (purulent)	8
Strumous ophthalmia (chiefly pustular)	37
Inflammation of cornea	13
Inflammation of membrane of aqueous humour	3
Iritis	9
Opacities and specks of cornea, .	21
Ulcers of cornea	8
Staphyloma of cornea	1
Contracted and irregular pupils .	2
Amaurosis	17
Cataract, single and double, . . .	9
Atrophy of eyeball	2
	<hr/>
	276

The next table exhibits the number of operations, and the gross results of treatment in all the cases.

	Operations for cataract.	By extraction.	By needle.
Penman,	1		1
Skinner,	1		1
Anderson,	1	1	
Brown,	1	1	
	—4	—2	—2
Artificial pupil		1	
Fistula lacrymalis,		5	
Tumours of eyelids,		6	
Vascular specks,		2	
Inversion of eyelids,		1	
		<hr/>	
		15	
Total No. of operations performed			19

No. of cases admitted . . .	276
cured	191
relieved	23
incurable	20
irregular in attendance . . .	6
died	1
still under treatment, . . .	30
operations recommended, . .	5
	<hr/>
	276 276

To these statistical results are appended some remarks on particular points. Mr. Watson points out the marked distinction between acute and chronic conjunctivitis. In these, however we see little novelty or peculiarity.

Injuries of the Eye from Foreign Bodies.

“ One of the most remarkable effects of injury of the eye, is that of immediate blindness, from concussion of the nervous part of the eye. Two striking cases of this kind occurred at the Eye Infirmary, from the detonation of percussion caps, which have of late come into general use for the explosion of fire-arms. In both of these, small portions of the percussion caps had struck the eye-ball, but without seeming to have produced any very serious wound. Slight inflammation followed, but complete blindness was immediately produced, though the eye retained its natural appearance. These accidents shew the great danger of using such caps, and that more effectual means should be employed to prevent it.”

It seems difficult to imagine any great amount of concussion to arise from a small portion of a percussion-cap impinging on the eye. A metallic fragment of that sort is either impelled with violence, or it is not. If it is, it must surely be driven into the textures it impinges on, that is, it must occasion more or less of a wound; if it is not impelled with such violence as to occasion this effect, we repeat that it is difficult to conceive its producing what can be considered as concussion. The facts, however, are superior to mere reasoning, and no doubt they are correctly reported by Mr. Watson.

“ Another very remarkable effect of a wound of the eye-ball is atrophy of the globe. This probably takes place from the want of regeneration of the humours of the eye at the part wounded, in consequence of inflammation destroying its secreting powers. The wound may be slight, yet the same effect follows; even that produced by the introduction of a couching-needle is not unfrequently the cause of collapse or atrophy of the eye to a greater or less extent.

In one very remarkable case of collapse of the eye-ball, resulting from an injury with a piece of glass seven years previously, an attack of inflammation came on, and the eye enlarged to a much greater size than the other, with great pain from the rapid effusion of fluid. When the inflammation abated, the eye again became somewhat collapsed. The inflammation of several different parts in the interior of the eye appears to occasion dropsy or dropsical effusion in the globe. In two preparations in my possession, of dropsy of the eye-ball from internal inflammation, the dropsical fluid is exterior to the retina in one, collapsing it into a cord in the centre of the eye; in the other the fluid is within the retina, situated between it and the hyaloid membrane of the vitreous humour, which is pressed forwards.”

Iritis.

Our author has met with several severe cases of this disease, which resisted mere antiphlogistic treatment, but yielded satisfactorily to mercury. We conceive that, unless special circumstance forbid the exhibition of that medicine, no well-informed surgeon would think of treating a severe case of iritis without

it. It would be like engaging in a bout of fisticuffs, and voluntarily tying up the right hand.

Cataract.

During the last six months, only four cases have been submitted to operation. In two, the cataract was extracted—in the other two, it was broken up by the needle. The following case is instructive.

“The case of the last patient, (Brown) in whom extraction was performed, was a very remarkable one, and requires particular notice. He was a glass-blower, 54 years of age, corpulent, and bloated in appearance, and was much addicted to the immoderate use of spirits. In prospect of the operation, I put him on a regimen of preparation, advising him to abstain from strong liquors, to live moderately, take exercise, and a small quantity of Epsom salts every second morning. This I found afterwards had only been partially attended to. He underwent the operation on the 18th of February, and bore it well. On the day after, the 19th, he had no pain or complaint, but from his appearance I was afraid that *delirium tremens* was coming on. I regretted I was obliged to go to a considerable distance from town, but left him to the care of the house-surgeon, Mr. J. P. Rae, and my friend Dr Craigie, who visited him on the morning of the 21st. On the 20th, there was no pain or inflammation of eye but slight symptoms of *delirium tremens* came on during the night. In the course of this afternoon, he became restless and unmanageable, then furiously maniacal, requiring restraint in bed. 21st, Passed a very restless night, and the scalp was hot, and covered with profuse perspiration: the pulse was from 120 to 130, and he was in a state of constant agitation, spoke incessantly, and in a state of furious delirium.—There is no inflammation of eye. Bleeding by cupping from the nape of the neck, cold applications to the head, antimony and opium were the remedies administered; but he continued to become worse, and sunk into a low state, which was followed by death about five o'clock on the evening of the same day.

On dissection, the vessels of the brain were much injected with blood; copious sero-albuminous effusion was found beneath the arachnoid coat; and the ventricles were dilated, and contained a considerable quantity of serous fluid. The eye operated on presented a very favourable appearance.

The above proved a most unfortunate case, and had a very unexpected termination. The symptoms were those of high inflammation of the membranes of the brain,—a conclusion which was confirmed by dissection. In this case it turned out upon inquiry that the individual, who drank habitually, never to intoxication, but always to maintain himself under the influence of the unnatural stimulus, had laboured under repeated attacks of *delirium tremens*, with spectral illusions, and the other symptoms of deranged cerebro-meningeal circulation. Many such patients seem to become affected with the symptoms of *delirium tremens* from their wonted strong drink being suddenly withheld from them, and in other instances from its being taken in a slight extent more than usual. These cases generally prove very unmanageable, and too frequently fatal, whatever course of treatment is prescribed.”

The surgeon who witnesses much hospital practice has frequent opportunities of seeing such cases as the one detailed above. Mr. Watson says, what perfectly accords with our own experience, when he observes that these cases are frequently fatal. If the reports of Baron Dupuytren and of others were to be received with implicit credit, the traumatic delirium or *delirium tremens* would appear a very manageable complaint. The fact, however, is, that a large proportion of those affected with it sink whatever are the means employed. We are disposed to think that a certain degree of inflammatory action of the membranes of the brain is very frequently mixed up with those symptoms which are usually considered, and which probably are of a purely nervous character. On the examination after death of persons who have sunk with all the symptoms of *delirium tremens*, we have observed, as in the case here

detailed by Mr. Watson, sero-albuminous effusion beneath the arachnoid membrane, effusion of serum within the ventricles, and vascular injection of the substance of the brain. That low inflammation should occur in such cases, and in such individuals as furnish examples of this disease, can scarcely excite any well-grounded surprise when we reflect that, under similar circumstances, and in similar constitutions, low inflammation of the cellular tissue of the surface of the body is extremely common. Neither need we be greatly surprised that treatment of all kinds is very often unavailing. It is probable that this is most unsuccessful when inflammatory action exists in addition to the purely nervous delirium. For these patients bear depletion so ill, that this, which is necessary to remove the inflammation, tends to aggravate that state of system in which the disease originated.

At the same time it is satisfactory, and in some instances may be highly useful to know, that delirium tremens is occasionally complicated, or succeeded by inflammation of the arachnoid. For this the surgeon should watch, and when he has reason to believe that it exists, he should be cautious of his stimulants, and feel his way, as well as he is able, with opiates, and local depletion or blisters. It must be owned that the management of such a case will too often be unproductive of satisfactory results, however judicious it may be. But the more appropriate, the more likely it is to be successful; and if we are prevented from effecting good, we can enjoy the reflection that we have done no harm.

THE HOSPITALS AND THEIR REGULATIONS.

Such is the title of a leading article in our contemporary the London Medical and Surgical Journal. Our readers will do us the justice to believe that in the observations we are about to make, we are actuated by no feeling of illiberality. Our medical politics cannot with any degree of fairness be charged

with a tendency of that kind. At the present time, when our own as well as other institutions are submitting or about to submit to the alterations rendered necessary by the changes which the diffusion of education has effected in the tempers and opinions of men, it is necessary that sound and judicious principles should be inculcated in periodical publications. Enthusiasm betrays many to consider, and interest actuates some to insist that whatever is, is *not* right, and that to change every thing established is the only thorough reformation. The hospitals and all connected with them, are the objects of unceasing and unmitigated hostility, and the catalogue of the abuses perpetrated under the sacred veil of charity, is, if we may believe the representations of some writers, of the most appalling and disgusting character. There is an ancient adage that the devil is not so black as he is painted, and we verily believe that the hospitals and the hospital "functionaries," are not the incarnations of injustice they are sometimes said to be.

The writer in the London Medical Journal has the hospital-phobia in a very high degree. The symptoms are of an aggravated character. After noticing the magnificent exterior of our hospitals, and the liberal spirit which in this country prompts individuals to dedicate such noble revenues to charity, and after vouchsafing a nod of satisfaction at the cleanliness, order, and comfort seen within, he passes to the *corps d'élite*, the medical and surgical officers of the institution. The picture is now changed—the hydra-heads of corruption rise—and the Reviewer lays about him right lustily to prostrate them gory and mangled in the dust.

The reviewer supposes a spectator walking into the wards and board-room. He is a spectator of the right sort, a thoroughpaced reformer, determined to be liberally dissatisfied with every thing and every one he meets. Well then the spectator has the *corps d'élite* before him, and taking a look at the awkward squad, he finds them distributed into "head surgeons, their assistants, and apothecary, house surgeons, and dress-

sers." He marvels that within the apparent terra firma of charity, extortion and peculation flourish abundantly.

"Such an inquirer would find, in the course of his investigation that the head, or principal surgeons, received an enormous remuneration; not from the funds of the establishment, but in fees from students resorting to it for information. He would find the assistant-surgeons touching no reward in the aforesaid way, but waiting for their turn to do so in succession, as their Gamaliels became defunct, or retired from the field. He could not fail, nevertheless, to perceive that a certain harvest was reaped by them in the interim; owing to the prominent situations they held. The apothecary might perchance be in his shop and so escape scrutiny, but the house-surgeon would be looking sharply after some hospital assistancy, or infirmary, and paying for standing on his elevation. Lastly, the dressers would pass in review; each in his own estimation a profound 'chirurgical,' but *nevertheless* paying for his post. After these would follow a promiscuous phalanx paying for being the witnesses of the feats of all the former. All this would our inquirer behold, and he could not fail to feel surprise that, in the house of charity, *payment* in some way or another, was the order of the day,—patients excepted, all parties would be fingering cash, either in receipt or disbursement.

"Looking at the amount of money collected from house surgeons, dressers, and forlorn-looking students (we speak of a large hospital), our friend would say, 'Here is money enough to support this glorious establishment extracted out of the pockets of those who avail themselves of the advantages it presents for acquiring knowledge,—doubtless the pelf is appropriated to that laudable purpose.' The rejoinder would be 'No! two or three principal 'chirurgicals' pocket all, leaving their assistants the hope of doing the same at some future period.' The inference he would draw from this exclusive dealing would be 'either these head surgeons are men of indefatigable exertion, and almost supersede the ne-

cessity of their unpaid helpmates, or they are the foremost of the eminent, a sort of magicians in their art!' What beadle or porter in a hospital would not smile at this conclusion? Not because it bears any thing extravagant in itself, but because the misapplication of the funds in question has been so long continued, that what is unjust and monopolising on the face of it, has been rendered indistinct and obscure by the rubbing of long usage.

"Disappointed at finding disinterestedness among the heads, the assistant surgeons receiving nothing, and chewing the cud of *hope*, would engage his attention, and probably his wonder at the eagerness with which men sought and contested for that office. He would say, 'here are charitable gentlemen, active and good, struggling to be employed in what brings them no remuneration—men doing good for its own sake!' But as disappointment when begun is apt to recur, so would it here. The disinterested assistant would be found rioting on loaves and fishes, which his attachment to a hospital procured him, by advancing his private practice."

The gist of all this lacrymation is, that hospital surgeons and physicians are paid. Really we see no abstract injustice in this; on the contrary, we think, and many others think so too, that the public services of medical men are not paid enough. A ruinous competition has ground down the profession into a starveling race—fellows who, like the opposition coachmen, not only take their passengers for nothing, but regale them with brandy and water on the road. Our dispensaries and many of our infirmaries have the services of physicians and surgeons for nothing—our hospitals have those services gratuitously also, as far as the hospital funds are concerned—and the remuneration, such as it is, is derived from the attendance of pupils. Now we do not see that Mr. A. or B. has any natural or indefeasible right to come from Yorkshire to London, to walk into the first hospital that presents itself, and accosting an *unpaid* physician or surgeon, to request him to shew him his practice, explain his views, and exhibit his skill

in the manner best adapted for his convenience. We find no such principle laid down even in "The Rights of Man by Tom Paine," and we think it would be difficult for the most ingenious Owenite to prove it. But setting aside the claim to remuneration on the part of the medical officers of hospitals, and disregarding rights let us look upon the question as one of expediency. In the first place, it may be stated as a general law, that men work better when paid for their exertions than when unpaid. Perhaps editors are a class of men whose liberality is as great as can be expected from any members of a civilized community. None are so eloquent as they on the necessity and advantages of liberality and disinterestedness—none can be more earnest in pointing out abuses and jobs and speculation. Yet in practice we find editors work nothing the worse for having a tolerable salary from a publisher, or a copious list of subscribers. The most liberal and patriotic writer never, so far as we can see, complains of finding his liberality and patriotism damped by their reward. Nay, singular as it may appear, the more he is encouraged, the more money he makes, the warmer is the complexion of his liberality. Were a new reforming Journal to be established on the broad bottom of no pay for any person concerned in its writing, publishing, or printing, we are inclined to think there would not be a very lively contest for the situations of editor, publisher, or printer. In short, look where we will—at the bar—the pulpit—the judicial bench—the ministerial office—the "gallant ship"—or the embattled field—we see that pay for services performed is admitted as a principle and acted on in practice, with the best effects. Why then should the unhappy hospital functionary be singled out as the only man who is to work for nothing—why are the feelings of human nature to be disregarded in his case—and why is he to be supposed capable of doing what nobody else is asked to do, to work well and willingly without reward?

No doubt the principle of pay may be admitted, yet exception may be tak-

en at its mode and its amount. In the case of the hospitals, we think that the method of remuneration is by no means bad. As the charitable institutions greatly depend upon private subscriptions, and as, whether that be so or not, the funds were intended, as exclusively as possible, for charity's sake, the less taken from those funds, for purposes not strictly charitable, the better.

If a man becomes surgeon to a hospital where he is not paid, he binds himself to perform certain duties to the patients; and, if those duties are not performed, the persons who elected him have, or ought to have, the power of punishing him by suspension, or even by dismissal from his office. But pupils may be said to constitute an excrescence on a charitable institution—they are not essentially connected with it. Unless it be a surgeon's or physician's interest to pay the utmost attention to pupils, there is and there can be no efficient mode of preventing his neglect of them. The mere routine performance of specified duties is utterly inadequate to promote their advancement—there must be a disposition to direct, encourage, and assist. That disposition, we repeat, can be ensured by remuneration only. And from whom can remuneration more properly come than from those who are to derive advantage from it.

If it were otherwise an object of importance to protect the pupil from expense, if it were better that he should pay no fee, and that his entrance into the profession should be made as cheap as possible, we might feel inclined to look for some other mode of payment than such fees afford. But, so far from it being advisable to render admission into the profession very cheap, we think it would be well if it were more difficult than it is. Our ranks are at present more than sufficiently crowded, and the rate of profit is fearfully beaten down by the ruinous struggles of starving competitors for bread. Not a town, not a hamlet, but bears evidence to this—not a medical practitioner but directly or indirectly feels it. It is an evil that has increased, is increasing, and ought to be diminished. Let the

common sense of our readers decide, whether that evil will be decreased by greatly cheapening medical education. For our own parts we do not hesitate to express our opinion, popular or unpopular, liberal or illiberal as it may appear. We think the facilities for reception in the profession should not be too great; but we do not think that, to effect the desirable purpose of preventing an indiscriminate rush into our ranks, arbitrary or unreasonable tolls should be levied. Education should not be merely made dear—it should be dear only by being extensive. Whether our numbers be great or small, our real respectability can only be secured by securing the highest amount of attainments.

We agree with our contemporary, that the offices of house-surgeon, dresser, clinical clerk, and others of the same description, should not be obtained by the payment of money. They ought to be the reward of industry and merit; at some of the metropolitan hospitals they are so. At St. George's Hospital, for example no fee is paid for any of the situations in question. But those officers who reside in the hospital pay a small sum for their board in the institution, which is not unfair, for a young man must eat and drink, and probably it costs him less to live in the hospital than out of it.

The amount of the money pocketed by the corps d'élite is ineffably deplored. This amount must vary with the numbers of attending students. If these are many, the emolument is great—if few, it is proportionately less. As pupils select what hospital they choose, and as we cannot suppose them such fools as not to go where they think they obtain the most for their money, it is surely no crime on the part of the surgeons of a particular institution, that they receive much of this voluntary recompence. At Bartholomew's Hospital, the emoluments of the surgeons and physicians are great, because the school is in high estimation—at the Middlesex Hospital, the reputation of the neighbouring school at the London University, and the erection of its hospital have so diminished the number of pupils, that the income of the medi-

cal officers must be small. Are Mr. Stanley and Mr. Lawrence to be censured, because they are thought such good teachers, that gentlemen insist on paying their money to them? It would be strange political economy this, to affirm that men should not be paid in proportion to their merits or their reputation. This is one of many instances of the absurdities to which an indiscriminate rage for altering and reforming leads.

We think we have disposed of the question of pay—we think we have shewn that it is just and politic to remunerate the medical officers of our hospitals, and we think we have shewn also, that the mode of remuneration is, perhaps, the best that the case permits.

But another point remains to be considered. While we advocate the payment of medical officers we do not advocate the principle of paying them for nothing. On the contrary, we think they ought to furnish a quid pro quo. It is imperative on them, in every point of view, both politic and moral, to return an equivalent, in the shape of assistance and instruction, for the pupil's fee. Our contemporary expends a good deal of useful indignation on this head.

“Our inquirer would then demand, with a rueful face, what sacrifice of time and labour functionaries so well paid, both directly, and indirectly, bestowed upon their studies? The answer, we opine, would yet lengthen his visage, ‘a very trifle, no more time or labour than is compatible with an extensive private practice; to which, indeed, they all bend their principal attention and energy. With a few solitary exceptions, they deliver no clinical lectures, by which to enlighten their juniors the *paying* students; nor visit the bedsides of the sick more than once a-day, unless upon some great emergency.’ We now quit our friend to make a few observations.

“Students paying at the rate of 25 guineas each to the principal surgeon of a hospital for their instruction, are permitted to follow the heels of the latter through the different wards—from 100 to 200 at least do this at a large hospital annually. It is plain, that so

great a number cannot, as things are now conducted derive much benefit from their *soi-disant* instructors in what is called hospital practice. For how can even a fourth part of the number of students witness the conduct, or hear the opinions of the surgeon, at the patient's bedside? Ten or twelve get close to him, surround the bed, and exclude the rest from perceiving what is going on. The celerity too, with which the business of visiting the sick in hospitals is performed, adds to the pupil's difficulties. Now, the only mode in which the surgeon could repair this error, in receiving more than he can give a fair equivalent for, in the ward-hunting business, would be by delivering, daily, clinical lectures in the theatre of the school, where there would be accommodation for all—an hour, at least, daily, should the surgeon lecture."

The picture here drawn is not strictly applicable to the present state of things. So far as the younger medical officers of hospitals are concerned, we suspect that, instead of lecturing too little, they lecture too much. The pupils are lectured to death, and the difficulty is, not to get clinical lectures delivered, but persons to attend them. An eminent man, like Sir Benjamin Brodie is attended well enough; but the junior surgeons and physicians are not attended. On this subject we can speak with the positiveness of actual information. We repeat, that the lecturers of all sorts are so numerous, that pupils cannot be induced to attend all—a good example of the difference between theory and practice. Suppose our contemporary's recommendations adopted—suppose a daily lecture of an hour from each surgeon and physician. Generally speaking, there are four of each, and, if each is to lecture at our contemporary's pace, that would be eight clinical lectures daily. We will imagine, however, that only two clinical lectures are delivered, and that one surgeon and one physician deliver daily an hour's oration. We will suppose, too, that in addition to this, the wards of the hospital are visited at length, and with minute attention. We will suppose all this, and we venture to say that the

majority of the clinical lecturers would enjoy audience of empty benches.

The fact is, that the prevalent mistake at present is the idea, that nothing is to be done but by lectures. The pupil is converted into a sort of slop-bason, into which every one empties his cup. No time is left to him for free thought or action. Yet, after all, there is nothing great effected but by an individual's own exertions. It is not what he hears, but what he sees or does. Clinical lectures are well in their way, but a diligent student, who takes his case book, and studies disease at the bed-side, will do much more than he who is lectured and crammed with other men's thoughts and experience, from morning to night. We repeat, that our pupils are over-lectured, overdosed with formulæ for ready-made knowledge. The great point is to stimulate young men to work—to set them about studying nature for themselves—to give them judicious advice and assistance—but not to spare, or attempt to spare them the exertion and trouble of thought. The surgeon or physician should point out in his rounds, briefly and succinctly, the peculiarities of a case—he should tell the student what to watch, and what to note—should shew him the mode of investigating circumstances—and explain the reasons and mention the probable effects of treatment. A careful visit, so conducted, would be much less tiresome, and much more useful, than incessant and formal clinical lectures. If an hour's clinical lecture is given each day, it is impossible for the ordinary student to attend to that, and properly to study cases also. Practically speaking, that impossibility is openly avowed, in the lax attendance on many of the clinical lectures that are given.

Reviewers, in their arm-chairs, settle all these matters to their own satisfaction. A clinical lecture is confessedly a good thing, and, therefore, the more of it the better. These gentlemen forget that there are lectures on *materia medica*, on midwifery, on physic, on surgery, on botany, on medical jurisprudence, and demonstrations of, and lectures on anatomy, and dissections, and attendance at the hospital, and ope-

rations to be seen, and pathological examinations to be witnessed, all, perhaps, or most of these things, to be done on the same day. Then the student is to eat and drink, and, as he is but a human creature, it is possible that he may sometimes feel fatigue, and even occasionally some ennui; and he has books to read, and notes to copy out, and may be supposed capable of indulging a little in reflection. Enough, says the proverb, is as good as a feast—enough work is possibly better. The student, we suspect, begins to discover that it is not lectures that are now deficient, and further improvements in the system of medical education will not probably consist in the delivery of more lectures.

It is not our object to point out exactly what ought to be done, but to dispel the exaggerated notions that pre-

vail, with respect to the supineness of the medical officers of hospitals. We are far from thinking our hospital system as perfect as it should be—there are probably sins both of omission and of commission, in their management—but the want of lectures, we are sure, is none of them.

We do not maintain that no clinical lectures should be given. We are far from thinking that, in fact, we have been clamorous for their delivery ourselves. But we do think they should not be carried too far, and that judicious bed-side tuition is probably not carried far enough. We must recollect that pupils are young men whose stock of patience and attention is exhaustible, and that it is easier to bid them sit hour after hour at lectures, than to make them—

— Come when we do call them.

MISCELLANIES.

MADDEN'S RESIDENCE IN THE WEST INDIES.

Dr. Madden is well known to our readers by his various travels in the east—travels which have delighted and improved the reading world in general. The present volume will keep up the interest which Dr. M's former works have excited; and the present field of his observations is still more intimately associated with our feelings and curiosity than the scenes of his former peregrinations among the pyramids, the deserts, and the Arabs of the Eastern world. Dr. M. went to the West Indies in October 1833, as a stipendiary magistrate, and filled that office for twelve months, when he got sick of so irksome an avocation, and returned home. Like a real and practised traveller, he had his eye upon every object, and nothing escaped his pen or pencil. The result is a couple of highly entertaining volumes, full of interest to the philanthropist, and to every one who is anxious for the dignity as well as the happiness of man—both of which

are so deeply implicated in the great experiment of Negro-Emancipation, now at length hazarded by this enlightened nation. Even the passage out to Barbadoes affords our author scope for many humorous delineations—but the islands themselves, with their heterogeneous population, black, brown, and fair, afford Dr. Madden inexhaustible supplies of materials for reflection as well as delineation. We think we could construct an entertaining article out of these volumes, but dare not transgress the boundaries of the *auxiliary sciences* at the utmost—and rarely even the limits of practical medicine. We must exhibit two or three short extracts on medical topics, as specimens of our author's style and manner. The first is on YELLOW FEVER.

“The accurate description of one virulent pestilence might serve for the general outline of all its forms; and whether the medical observer has to describe the outbreak, progress, and result of yellow fever, of plague, or cholera, he has the same general phenomena to give to the disease; the same

indefinite notions of its origin to observe the same ignorance of its nature to lament; the same conflicting advocacy of its contagious and non-contagious properties to sicken at the sound of; to notice the same leading symptoms of the sudden depression of the vital powers, the same fatal prognosis of the collapse, the same prevailing disorder in the public mind, the same perplexity in medical opinions, the same ignorance of the disease, and in the majority of its attacks the same event—death.

And as the pestilence happens to embody its miasma in any peculiar form determined by local influence,—an inflammatory fever in the West Indies, a congestive fever in the Levant, or an asthenic one in Hindostan, or where else it may have travelled,—call the disease yellow fever, plague, or cholera, as the poison may be determined to the gastric and cerebral organs, or to the glandular system, or to the mucous membrane of the alimentary canal—the medical observer has to describe a pestilence that originates he knows not how; that first visits the abodes of wretchedness and squalor, and disappears for a season, or diminishes in virulence to return again and expend its fury over the community at large; that is most fatal at its outbreaks, and least so, compared with the number of cases, as it declines; that appears to destroy life by its sudden seizure on the nervous energy; and like the poison of the rattle-snake, though in a less concentrated form to exert its baneful influence at once on the very principle of life, and to baffle the physician 'who choaks his art' to arrest its progress, and to do with physic what nothing but the regulations of a medical police can accomplish,—to prevent its dissemination by placing its strongholds under the influence of pure air and clean water, by undertaking the direction of the immediate burial of its victims; and lastly, (whatever ridicule may attach to the suggestion of one who has only some acquaintance with each form of the pestilence to oppose to prevalent opinions,) to obviate danger, to avoid disagreeable effects that may arise from causes independently of any specific

contagion, by destroying in every instance the bed and bedding of its victims. It behoves me to pull up—I am on the verge of medical politics, and none but fools and tyros rush where doctors fear to tread." Vol. 1, p. 72.

The sangaree system is thus archly satirized.

"The saloon is destitute of windows; but there is no dearth of doors on either side, and these lead to the bed-rooms. Carpets, window-curtains, grates, and hangings, are, very properly, no part of the paraphernalia of the saloon; but, in lieu of these, the stranger slides, at the risk of his neck, over a highly-polished floor; and sits down, as he imagines, at the peril of his life, in a state of liquefaction, in a thorough draft, and for the prevention of cold makes his first call for a glass of sangaree; and in the course of half an hour, to obviate the heat, which is fusing his yet 'too solid flesh,' he is advised to have recourse to the old, simple, unadulterated, 'and best beverage after all'—plain water *diluted* with brandy:—and, before he goes to dinner, to give him an appetite, and dissipate the confounded languor that clogs his energies, he cannot decline a small wine-glass full of bitters mixed with Madeira."

We must close our short notice in this number, with the following poetical sketch of a tropical night, as it is first experienced by a JOHNNY NEWCOME, in either the Eastern or Western hemisphere, within the tropics.

"It is the hour,
When churchyards yawn, and demons lower,
And the confounded roaches-cock
Crawls o'er the bed that's made of flock;
And vile musquitos pierce the net
That is not made of jaconet;
And horrid ants, in lengthen'd train,
March up your sheets and down again;
When watchful strangers to and fro
Are tossing, and would gladly know
At what degree of Fahrenheit
A man may get a slumber light;
And fain would greet the morning gun,
To drown the buzz his ears doth stun,—
Or hear a Charley cry 'Move on,'
And tell the world 'Tis half-past one!'
But gas proclaims 'night's cheerless noon,'
To not a 'minion of the noon,'
In Negroland—and one must lie

Awake, in darkness—as did I
 Full many a night at that lone hour
 When incubi exert their power;
 And supper-eaters go to rest,
 And dream of mountains on their breast;
 And indigestion has unfurl'd
 Her flag o'er half the white-faced world."

In our next number we shall give a few more extracts from these highly amusing volumes of Dr. Madden, still keeping to those parts that are interesting to the medical profession. Mean time we strongly recommend the book to the libraries of our various societies now scattered throughout the kingdom.

PHILANTHROPIC ECONOMY, OR THE
 PHILOSOPHY OF HAPPINESS. By
 MRS. LOUDON.

Although this literary and political curiosity is not from the pen of a doctor, it is the product of a doctor's wife, and on that account alone, lays claim to a short notice. The subject, too, is not entirely unconnected with medicine. *Economy* is the order of the day, both in and out of the profession—and it is not the worse for being *philanthropic*. In respect to *Philosophy*—she is hand and glove with *Physic*—witness the four splendid volumes of Dr. Thornton—the "*PHILOSOPHY OF MEDICINE*." *HAPPINESS*, too, cannot exist without health—the end and object of *physic*! Indeed there are very few chapters in this talented work of Mrs. Loudon, which might not claim some kindred with the legitimate aim of the healing art. Thus our fair authoress descants on those causes which have a tendency to "starve the community"—and who will deny that *starvation* is injurious to health? Many pages are devoted to the effects of *OVER-LABOUR*; it is needless to say that this, also, is extremely insalutary. She treats eloquently of the consequences of anxiety, misery, hopelessness,—in short, the whole fruits of oppression—and who will say that these are not noxious to the *individual constitution*, as well as to the constitution of the state? What doctor, then, unless he wish the government to make

work for *himself*, can be other than a true reformer? Mrs. Loudon makes sad havoc amongst the corrupt and self-elected corporations. She is, therefore, a strong ally of the reform medical press. Mrs. Loudon is for abolishing "the laws of primogeniture," as injurious monopolies in favour of *first births*. We think our obstetric brethren will agree with her that all births are, or ought to be equal, in point of property and value—and that every second, third, and succeeding child should not be considered as a kind of "after-birth," to be got rid of as speedily as possible, and thrown away as useless to the family. In fine, if Mrs. Loudon's tenets come to be acted on (and they are in the ascendancy at present) we may hope to see the evils of the body politic as effectually purged off by her salutary state physic, as those of the human body are by No. 4 of the springs in her own town of Leamington.

To conclude, we recommend Mrs. Loudon's cheap book to the attention of medical reformers—a numerous and influential class, who can jog the memories of their parliamentary patients, by hints from this comprehensive, yet compendious digest of political knowledge. Mrs. Loudon's principles harmonize very much with those of Mr. Coombe, already noticed in this Journal; and she leaves Miss Martineau in the shade, by the boldness of her views, and the uncompromising character of her political maxims.

A SERIES OF ANATOMICAL PLATES IN
 LITHOGRAPHY, &c. &c. &c. By
 JONES QUAIN, M. D. &c. &c. &c.
 Fasciculi XVIII. XXVI.

These plates are excellently executed. Dr. Quain has now commenced the publication of the plates of the arteries. They bid fair to surpass even their predecessors in accuracy and in beauty. We strongly recommend these plates to anatomical students. We would suggest to Dr. Quain rather to increase the number, in order to render them as copious as Bourguery's. We

are sure the purchaser will gladly secure extension of the work, if that will render it more complete.

THE HARVEIAN ORATION, June 1835.
By SIR HENRY HALFORD, Bart.

The sudden death of Sir George Tuthill left the illustrious HARVEY without an orator—had not the President of the College stepped forth, and, at a very short notice, supplied the place of the deceased socius. It is probable that very few of the Fellows could have so promptly and ably filled up the vacancy as the veteran who accepted the office. This oration is very short; and, curious enough, the name of Harvey does not occur—except in the title-page! We are very far from imputing this as a fault to the distinguished orator. We commend the omission. The orator ought always to be free from any shackles as to the subject of his oration, and under no necessity to introduce the name of Harvey, at all, in the body of the discourse. The present oration contains four concise *eloges* to the memory of four recently departed Fellows of the College—Sir George Tuthill, Dr. Maton, Dr. Ainslie, and Dr. Powell. The characters of these personages, moral and medical, are rapidly, but graphically portrayed. To the memory of Sir George Tuthill a feeling and felicitous tribute is paid. It appears that he carried off the “*primi ordines honoris*,” at Cambridge, and that, in him were centred “*plurimæ literæ, nec eæ vulgares, sed reconditæ*.” Of valetudinary health, from infancy, he was seized in the spring with laryngitis which proved fatal, after six days of great suffering. Bronchotomy was performed, at the patient’s own request—but he died immediately after or rather before the operation was finished! “*Nam peracto vix, ac ne vix quidem opere consumptus est*.” He is represented, and we think, justly, as exhibiting gravity without severity, cautious and clear judgment—benignity, clemency, and ability. The gravity of Sir George Tuthill’s countenance was sometimes so extreme, that he assumed an aspect

truly saturnine. There is a well authenticated anecdote of a lunatic who, after staring, for a moment, on Sir George exclaimed with great emphasis—“get thee behind me SATAN!!” This, however, was one of the many instances, in which physiognomy was at fault. We had some knowledge of the deceased, and abating the natural prejudices in favour of *his order*, and the equally natural inclination to benefit himself in the way of his professional pursuits, we believe him to have been a very honorable and upright character.

We are gratified in this place to find Sir Henry Halford discountenancing the practice of instituting a class of *mad doctors*, for the cure of the insane. Really Sir Henry appears half-inclined to be a *leveller*!

“*Tollendos igitur hos limites esse puto, et philisophiam medicinæ sociam et ministram, adsciscendam:—nec in pharmacopolarum officinis tantum, sed in scholis quoque sapientum, quærenda remedia malorum.*”

In this sentiment we perfectly agree with the illustrious President.

Of Dr. Powell we knew little—of Dr. Ainslie less. The *former* published some papers, and was physician to Bartholomew’s Hospital. The *latter* pursued the “noiseless tenor of his way” to the grave—for, during the last 17 years we hardly knew that such a man existed amongst us, except by the name on the door in Dover-street.

Of Dr. Maton, Sir Henry has drawn a just character. From local or accidental circumstances it happened that we had a more intimate *professional* acquaintance with Dr. Maton than with any other Fellow of the College. Though we were opposed to each other in medical politics—and, during the late fatal epidemic, in medical doctrines also, yet we always found Dr. Maton to be a man of strict honour, of mild demeanour, of rigid punctuality—in short, a practiser of the most sound medical ethics. Nothing could be more true than the following characteristic of Dr. Maton, in language resembling that of our Saviour.

“*Nam quod decens et honestum esset faciliè percipiebat, nec alteri facie-*

bat unquam quod sibi faciendum no-
luisset."

We have thus discharged a duty—a grateful one—to a political opponent, but a private friend! To Dr. Maton we would have entrusted our personal property—but not our public institutions. The *former* would have been perfectly safe in his honest and honourable hands:—the *latter* would have been endangered by that bias of *judgment*, which is generally inseparable from education in particular tenets.

We were struck with the following passage.

"Me, si deo placuerit in graviscentibus annis, inbecillitate valetudinis impediti—esto. Id omne benevolentiae ejus acceptum referam. Sin otii fructus detur, cum sana mente in corpore sano, ad vitam ante-actam recogitandam, et vestem, quasi colligendum, quemadmodum Imperatori ante cadendum in Capitolio curae fuit, ut decorè, et cum dignitate discederet, laudem Deo majorem, majoresque gratias debiturus solvam."

Sir Henry Halford has lost the opportunity of winding up a long and prosperous professional life, with additional honours to himself, and benefit to his brethren, by using his influence in liberalizing the Institution over which he presides *and* thus making it the bulwark and pride of the medical profession in this country, instead of a mark at which the arrows of scorn, ridicule, or hatred have been daily levelled. We long had hopes that the keen-eyed president would have foreseen the policy of liberal measures, before it was too late. The announcement of a metropolitan university of "ONE FACULTY," after all must prove the funeral dirge of the College!

We apprehend that very few, after the establishment of a Metropolitan University, will gratuitously throw away fifty or sixty pounds for the honour of a license from the College of Physicians, which can be of no use whatever to them in practice. It was only the other day that one of the most talented and influential Fellows of the College declared publicly, in the hearing of many professional men, that "THE

COLLEGE WAS EFFETE," and might close up its doors, for there would soon be none to enter them!

DISEASES OF THE SKIN. ATLAS OF PLATES

It was our intention, as will appear from our review of Rayer and Green's works in the present number to have selected some of the most instructive cases therein detailed, with the view of illustrating the very important subject of cutaneous diseases.

The great press, however, of materiel of a most interesting and useful description, which we have collected from numerous sources during the past quarter, has prevented us from doing so. This omission we regret the less, as our readers will very probably be induced by the recommendations which we have worthily bestowed on the treatises of Drs. Rayer and Green, to examine them attentively for themselves. Indeed no well-informed physician of the present day can dispense with a most diligent perusal of the great and excellent work of the French author; and to the younger student of medicine we do not hesitate to recommend the compendium of Dr. Green in preference to Bateman's Synopsis, (no mean praise,) as more simple in its descriptions, and more practically useful in its therapeutic instructions. It is unnecessary to say more of either of these works.

The study of dermatology, as of botany, is greatly facilitated by a series of well-executed drawings.

The Atlas, which accompanies Rayer's Treatise, consists of twenty-two plates, each containing from twelve to eighteen figures in which are represented most accurately almost every species of cutaneous disease.

With the exception of very few, the figures were drawn from the living subject by one of our own countrymen, Mr. James Young, of Paisley, who has proved himself a most admirable draughtsman. Certainly we have never seen any drawings of disease from the foreign press equal to those contained

in this Atlas. They have little of that peculiar artificial-like mannerism which almost inevitably marks the productions of the French graver. Four of the plates are devoted to the illustration of the Protean forms of syphilitic eruption, and on the whole they convey a very faithful representation of their more obvious and common character. The value of the Atlas is greatly enhanced by its thus affording to the less experienced practitioner a standard of reference, to guide him in the discrimination of this most varying and multiform disease.

BANFFSHIRE MED. CHIRURG. SOCIETY.

To Dr. James Johnson.

Sir,

I am instructed to forward to you the following minute of the proceedings of the "Banffshire Medico-Chirurgical Society."

"The Banffshire Medico-Chirurgical Society, taking into consideration your deservedly prominent rank in the medical profession, as well as the ability and industry which you have displayed in the cultivation of science, more especially of such branches as tend to the advancement of medicine, have, as an expression of their admiration of your talents, elected you as an honorary member of that society with all the privileges; and have instructed their secretary to transmit this notification of the same."

I am also directed to intimate that this society was instituted in 1834, for the purposes of forming a library, museum, &c. &c., and of communicating all interesting cases which may happen in the course of practice, of reading papers on subjects connected with medicine, and of endeavouring to keep pace with the advancing state of medical literature throughout the kingdom.

I have the honor to be,

Sir,

Your obedient Servant,

HENRY MILNE, Sec.

Banff, 16th July, 1835.

BIBLIOGRAPHICAL OBITUARY; OR THE

LIFE AND DEATH OF THE MEDICAL QUARTERLY REVIEW, WITH THE APPEARANCES ON DISSECTION.

It was only in January of last year (1834) that we were called upon to deliver a funeral oration at the grave of our oldest contemporary—the MEDICAL and PHYSICAL JOURNAL—the last of the MOHICANS, or at least of the MONTHLIES! Little did we suppose that we should so soon be summoned to perform the same obsequies at the tomb of its son and successor. There certainly were some inauspicious circumstances attendant on his birth.—Young MASTER QUARTERLY was delivered by a kind of Cæsarean or *post-mortem* operation, some time after the decease of his parent; who, having been, for many years, completely *jaundiced*, sent the baby into the world with "*icterus infantum*," or "yellow gum," from which the young QUARTERLY was never able to clear its skin, during the brief span of its existence. The youngster, if not a child of great *hope*, in the eyes of others, was certainly of much *promise* on his own part. Being born in a church-yard, he evinced a strong predilection for the *dead languages*—and was so profoundly and precociously versed in *tongues*, that one would have supposed he had been born on the tower of Babel. He could quote Arabic, Hebrew, Hindoo, Latin—aye and—

—Greek,
As naturally as pigs squeak.

He was a profound medical politician, from his cradle. Being brought up at the very foot of Elizabeth's statue, he was a great stickler for the "monarchical principle" in physic; and therefore he worshipped, even to idolatry, the gods and demigods of PALL-MALL EAST. It was clear, indeed, that MASTER QUARTERLY had an eye to the FELLOWSHIP, from the moment he was capable of distinguishing light from darkness. The daily contemplation of St. PAUL's probably led our young contemporary to be a "HIGH CHURCHMAN," in medical politics. In his eyes,

Oxford and Cambridge were the only places to acquire professional knowledge, as well as morality and religion. Subscription to the 39 articles, on bended knee, in Pall-Mall East, he considered as the only criterion of medical science and of fine "moral feeling." All below the FELLOWSHIP, or beyond its pale, were illiterate licentiates or rank radicals, in his estimation. An ardent admirer of our "venerable institutions," the young QUARTERLY, "hated the very name of reform" in physic, as heartily as Lord Stormont did in politics.

Being cut off within the first two years, his teeth were very little developed, and his *bites* were never considered as very formidable or dangerous. His "*dentes sapientie*" never made their appearance, of course—and few even of his *grinders*. In his *critical* avocations, however, he made good use of his *incisors*, and not unfrequently drew blood from the fingers of those who were soft enough to examine the young lion's mouth. He experienced very few of the infantile or eruptive diseases, except the WHOOPING COUGH, of which he had a violent attack once in every three months. In each of these paroxysms, great alarm was entertained by the friends of the young prodigy. The *inspirations* were observed to be stridulous, and far from *filling the chest*; while the expectoration was of a *frothy* and unsatisfactory kind. The "*râle*" was sometimes "*sibilant*"—sometimes "*crepitant*"—but the breathing was always laborious, and the *circulation* confined. The attendant physicians apprehended *hydrothorax*, but Dr. Webster was positive that the source of the malady was in the *head*. In the eighth paroxysm, about the end of June last, the patient was seized with LOCK JAW—a symptom which had never been anticipated—and departed this world on the first day of July—aged one year and nine months!

Abstulit clarum cito mors Achillem!

Having no landed or funded *property* to bequeath, the deceased left his MANTLE and his BLESSING—not to any of his poor *friends*—(some of whom were not out of the need of such a God-send)—

but, to a *fetus in utero*—of which its mother, Mrs. Forbes, of Chichester, declared herself *enceinte*, and three months gone. Mr. Connolly, of Warwick, the father, deposed to the truth of this statement. Although the embryo had not even *quickened*, at the time of the testator's death, yet the latter, in one of those prophetic extacies, which Sir Henry Halford has so often witnessed at the dropping of the last curtain, declared that the forthcoming stranger would prove a second CRICHTON—and that, through his influence, a *physical* revolution would be wrought in the *periodical* world.

Many conjectures were hazarded as to this bequest of the mantle and benediction to a BEING yet unborn; but the enigma was solved when it appeared that a noted midwife, of the name of ADLARD, residing in Bartholomew Close, and who had helped the DAM of the dying kid through many a lingering labour and perilous abortion, was the "SAGE FEMME," engaged by Mrs. Forbes to deliver her of her precious babe on the first of January next, 1836.

AUTOPSY.

It was not deemed necessary to examine, with much minuteness, any other *cavities* than the *head* and the *chest*. In the latter, *nothing* was found. The stomach contained some *undigested* matters which, on examination, proved to be half-masticated leaves of old books and illegible manuscripts. In the bladder were found a good deal of *gravel*, which the deceased had been in the habit of discharging periodically, with considerable *difficulty*. It consisted chiefly of the triple salts—the *attic* being very conspicuous. The cystic duct was obstructed by a biliary concretion, which accounted for the colour of the skin, and the want of *gall*, latterly, in the *egesta* of the deceased.

But the head presented several remarkable prominences, and Drs. Elliotson and Epps were requested to examine it with their callipers. They did so accordingly.

The organs of AMATIVENESS and PHILOPROGENITIVENESS were not developed, of course, in so young a subject, and therefore it is a matter of con-

jecture whether or not there would have been issue, had the young "TWO-YEAR-OLD" arrived at maturity.

Language. This organ was "prodigious." Our phrenological readers are aware that the organ of language lies directly above and behind the eye, resting on the orbital process. That process was bent down under the pressure of the organ, so that the eye required powerful lenses to prevent erroneous impressions on the retina.

Veneration was at least double its usual size—hence the worship of the *magnates* in Pall Mall East.

Locality was dissimilar and even divergent on the two sides of the brain.

Time, very short.

Number, very small.

Tune, Saul's march.

Weight, very light.

Concentrativeness, not remarkable.

Self-esteem, enormous! This organ is situated at the very top of the head, and is placed between two others, the "love of *approbation*." The trio had grown to such a magnitude, that several neighbouring organs were annihilated entirely! Neither Dr. Elliotson nor Dr. Epps could find any trace of *constructiveness*, *acquisitiveness*, or *ALIMENTIVENESS*. This last circumstance, coupled with the well known fact that, even the greatest genius cannot now live upon *APPROBATION* alone, may account for the premature death of our juvenile contemporary.

In other respects, there was nothing very extraordinary in the head. The cranium was rather thicker and harder than is usually observed in such young subjects; and the brain, in certain parts, had undergone some degree of *ramollissement*.

There is no case in medicine from which some useful information may not be drawn. In the foregoing instance, we observe that, although the organ of "SELF-ESTEEM, or rather the propensity of which it is the representative, is a very useful organ, if within proper bounds, yet when overgrown, it leads to variety, conceit—and, what is worse, to contempt of our neighbours. "Love of approbation," if moderate, prompts to useful or even noble exertions—but if inordinate, it generates boundless am-

bition, or love of fame, which heeds not the misery or inconvenience of others, if they stand in our way! An inordinate addiction to *language*—to words rather than things—too often begets a propensity to *pedantry*, than which there is nothing more insufferable.

But we should not have given way, even to this harmless and jocular allegory, had not our deceased contemporary, in various parts of his short career, levelled pretty significant sneers at his fellow-labourers in the vineyard of periodical literature—a practice by no means uncommon among neophyte journalists, and one which we regret to see recently adopted in a quarter where we little expected such a procedure. We ask those who are about to undertake the laborious and the *hazardous* task of originating and sustaining a new medical journal, whether it is very *prudent* to preface their intentions by such a passage as the following?

"There seems the fullest reason to believe, notwithstanding the *great and acknowledged ability* displayed in the medical periodical press, that, in the actual state of medical literature, a work of *higher critical aims* than are professed by the conductors of the *principal journals* in this country, is really desired by the members of the medical profession."

Is it wise—is it *modest*, after such a statement, to announce themselves as the editors who are about to rise above this "acknowledged ability," already in the market, and take *higher grounds* than any even *profess* to aim at, in the year 1835? This is quite analogous to the language held, two short years ago, by the defunct Review; and, indeed, it is the usual prelude to new journalism in general. Yet, in all enterprizes attended with danger of failure, it is surely most *impolitic* (to say the least of it) to lay claim to merits or talents superior to those already in operation, thereby directly insulting the whole of their competitors. This self-exaltation will do them no credit, even if they succeed in driving the whole of their rivals out of the field; but, should miscarriage take place—an event to which all are liable—see, then, to what ridicule they have justly exposed themselves by this gra-

tuitous and wanton wound inflicted on the feelings of their contemporaries. In this respect, we can look back, without shame or remorse, to the outset of our own labours, and we think our readers will pardon us for quoting the following passage from the preface to the first volume of the quarterly series of this Journal, June 1820.

"As one of the now numerous candidates for performing this office, the Medico-Chirurgical Review has presented itself before the profession, in its present form, without any wish to depreciate its cotemporaries, or to magnify the necessity that existed for new labourers in the vineyard of periodical literature. Such an attempt would be equally impolitic and illiberal. The PUBLIC is a stern, inflexible, and, finally, unerring tribunal, before which it is unnecessary to plead the cause of merit, and useless to varnish infirmity.—Friends may flatter, and enemies may defame, but the Public at large do justice, because they are far removed from the sphere of personal feeling and influence. It is to this tribunal—and to this tribunal *alone*, that we shall ever appeal."

To these sentiments we still adhere, after fifteen years of further experience,

The Editors of the Journal announced dwell, with great satisfaction, on the advantages of "free and candid critical discussion"—and also on the "just source of complaint, on the part of authors, that this important task *has been confided to persons little qualified to undertake it.*" Here, then, we have a general and sweeping denunciation against the whole of the medical periodical press of this country! Let us be permitted to quote a passage bearing on this subject, from the first volume of this Journal, already referred to.

"There is, however, a class of medical society, numerically not great, but potentially important, on which this Journal may, probably, have some claims—it is the class of MEDICAL AUTHORS. To analytically portray their works before the whole professional circle, leaving the judgment in general, to the Public itself, is no mean service to authors—no common advantage to readers—

no sinecure office for reviewers—no inconsiderable check on hypercritics.—Whether the MEDICO-CHIRURGICAL REVIEW executes this task, with any degree of credit to itself, or satisfaction to the Public, it is for that Public to decide. If it does—their patronage will, in justice, be continued—if it does not, it will, with equal justice, be withdrawn."

To this principle we still adhere—and we boldly and fearlessly place it in juxtaposition with that principle which is set forth as its superior. Fifteen years have enabled the public to decide on the comparative merits of analysis and criticism—but if that period has not been sufficient, why let them take fifteen years more. In the course of that time, we have no doubt that the new journalists will have ascertained the relative value of the two systems, and shaped their course accordingly.

The fact is, that in no department or pursuit of human knowledge is there less room for high-flown criticism and erudite disquisitions, than in MEDICINE. Practitioners have wisely exchanged speculation for observation—and theory for experiment. Who now puzzles his brains about the doctrines of Van Helmont, Stahl, Boerhaave, Cullen, Darwin, or Brown? The utility of medical *criticism* consists chiefly in the ability (acquired by observation) to distinguish truth from error—and facts from fictions. This power of discrimination needs no *critical disquisitions*. It is exercised, and exercised best, in few words. But the great labour of the journalist, after all, will be *analysis and concentration*. The deceased journal did not think so. It set off with high pressure steam on the sea of CRITICISM; but criticism was the rock on which it split—and is the grave in which it lies buried. When it had plenty of sea-room and fine weather, it steered directly for the land of promise. When it found itself among the breakers, it tried to tack ship, and haul off into the very course which it first despised. But it was too late. Rudder and sails were useless—it drifted among the shoals—and was shattered against the rocks.

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OR,

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
2. Illustrations in British Zoology. By GEORGE JOHNSTON, M.D.—(From the Magazine of Natural History, vol. viii.)

3. A further Inquiry concerning Constitutional Irritation, and the Pathology of the Nervous System. By BENJAMIN TRAVERS, F.R.S. Senior Surgeon to St. Thomas's Hospital. One Vol. 8vo, pp. 444. Longman and Co. 1835.

4. An Essay on the Nature of Diseases. By A. GREEN, LL.B. Octavo, pp. 51. Simpkin and Marshall, July, 1835. 2s.

5. Lectures on the Diseases of the Lungs and Heart. By THOMAS DAVIES, M.D. Physician to the Infirmary for Asthma, Consumption, &c. Octavo, pp. 512. Longman and Co. July, 1835.

6. A new Practical Formulary of Hospitals of England, Scotland, Ireland, France, Germany, Italy, Spain, Portugal, &c. &c.; Translated from the French of MILNE EDWARDS and P. VASSEUR, and considerably augmented, by MICHAEL RYAN, M.D. Duodecimo, pp. 544. Henderson, London, July, 1835.

 This is one of the most valuable little vade-mecums that we have ever seen. It is indispensable for the practitioner of every grade and denomination.

7. The Clinique Médicale; or Reports of Medical Cases. By G. ANDRAL. Condensed and Translated by Dr. SPILLAN. Part II. Diseases of the Chest. Pp. 240. Renshaw, July, 1835.


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
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11. A Lecture introductory to the Science of Comparative Anatomy. By H. W. RUSH, M.R.C.S. Pp. 16. 1835.


12. An Address to the Liverpool Medical Society, on being elected one of its Fellows. By THOMAS JEFFRAYS, M.D.

 Contains several hints, well adapted for a medical society.

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
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16. Report (Parliamentary) from the Select Committee on Medical Education, with the Minutes of Evidence and Appendix. Part I. Royal College of Physicians—Part II. Royal College of Surgeons. Presented by HENRY WARBURTON, Esq.


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
19. The Principles and Practice of Obstetric Medicine, &c. By Dr. D. DAVIS. Part 42, with Plates. August, 1835. Price One Shilling.

 This Part contains 48 quarto pages of letter-press and four Plates—all for a shilling!


20. A Series of Anatomical Plates in Lithography, &c. By Dr. JONES QUAIN. Fasciculi 26 and 27. Division 2, Arteries 2 and 3.

 The fourth Plate, representing the arteries about the neck and axilla, is remarkably well executed.

21. An Introduction to the Study of Practical Medicine; being an Outline of the leading Facts and Principles of the Science, as taught in a Course of Lectures delivered in the Mareschal College, Aberdeen. By JOHN M'ROBIN, M.D. &c. Octavo, pp. 226. Part the First.

 This Work is designed as a textbook for students, and appears to be very judiciously compiled, with the view of assisting the tyro in the acquisition of elementary knowledge.

22. The Dublin Journal of Medical and Chemical Science, &c. Sept. 1835.


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
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25. Formulary for the Preparation and Employment of several new Remedies, such as Morphine, Codeine, &c. Translated from the eighth Edition of the For-

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
 This translation is somewhat more copious than Dr. Gully's, from which an extract will be found in our pages (*Kreosote*); but, on comparing several articles, we find no material difference. The price differs by Two Shillings.

26. A Map of the Anatomy of the Eye, with the latest Discoveries. By J. H. CURTIS, Esq. Oculist and Aurist. Price Five Shillings.

 The numerous figures in this plate are extremely well calculated to facilitate the study of that complicated, but beautiful apparatus—the HUMAN EYE.

27. A Treatise on Hydrocephalus, or Water in the Brain; with the most successful Modes of Treatment. By WILLIAM GRIFFITH, M.R.C.S. Small 8vo, pp. 86. August, 1835.

28. A Manual of Select Medical Bibliography, in which the Books are arranged chronologically, according to the Subjects, and the Derivations of the Terms, and the Nosological and Vernacular synonyms of the Diseases are given, with an Appendix, &c. &c. By JOHN FORBES, M.D. Royal 8vo. pp. 403. Double Columns. August, 1835.

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29. A Dictionary of Terms used in Medicine and the Collateral Sciences. By RICHARD D. HOBLYN, M.A. Oxon. 8vo. pp. 329. Double Cols. Price 9s. Sherwood and Co.

 Concise and ingenious.

N. B.—The Bibliographical Record of this Number closed on the 13th of September.

ERRATA.

In page 284 of our last Number, for Dr. FLEMING read Dr. HEMING—and for F. CUMIN, read Dr. CUMIN.

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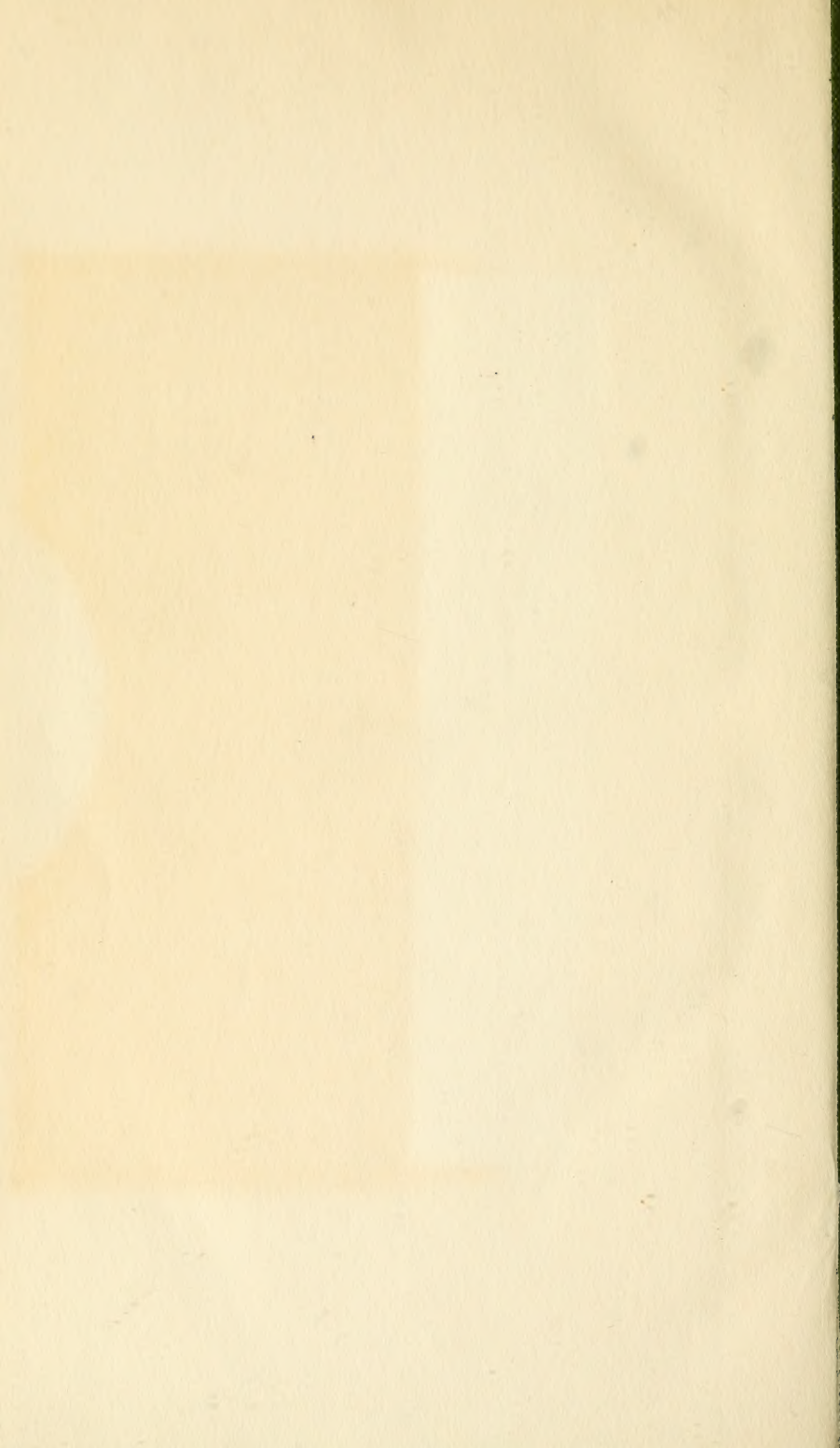
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